OMB Number: 4040-0004
Expiration Date: 12/31/2022

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 03/25/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier: Wisconsin

8. APPLICANT INFORMATION:

* a. Legal Name: City of Madison

* b. Employer/Taxpayer Identification Number (EIN/TIN): 39-6005507

* c. Organizational DUNS: 0761479090000

d. Address:

* Street1: 210 Martin Luther King, Jr. Blvd.
Street2: Room 403, City-County Building
* City: Madison
County/Parish: Dane
* State: WI: Wisconsin
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 53703-3340

e. Organizational Unit:

Department Name: Mayor's Office

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Dr.
* First Name: Jessica
Middle Name:
* Last Name: Price
Suffix:

Title: Sustainability and Resilience Manager

Organizational Affiliation: City of Madison

* Telephone Number: 608-267-1992
Fax Number:

* Email: jprice2@cityofmadison.com

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

C: City or Township Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act

*** 12. Funding Opportunity Number:**

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: WI-002 * b. Program/Project: WI-002

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 11/01/2022 * b. End Date: 10/31/2025

18. Estimated Funding ($):

* a. Federal	429,746.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	429,746.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Dr. * First Name: Jessica

Middle Name:

* Last Name: Price

Suffix:

* Title: Sustainability and Resilience Manager

* Telephone Number: 608-267-1992 Fax Number: 608-267-8671

* Email: jprice2@cityofmadison.com

* Signature of Authorized Representative: Jessica Price * Date Signed: 03/25/2022

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name: City of Madison

Address: 210 Martin Luther King, Jr. Blvd.
Room 403, City-County Building

City: Madison

State: WI: Wisconsin Zip Code: 53703

B. DUNS No. 076147909

II. Is the applicant currently receiving EPA Assistance? ☒ Yes ☐ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

Six cases pending. 1) 11/20/2021 - Claim #GLCM00001825. Alleges age related discrimination. 2) 10/11/2021 - Claim #GLCM00001756. Alleges discrimination based on mental health and rage. 3) 1/13/2021 - Claim #GLCM00001324. Alleges discrimination based on race. 4) 10/08/2020 - Claim #GLCM00001176. Alleges discrimination based on race, color, sex and filing a previous complaint. 5) 2/07/2020 - Claim #GLCM00000835. Alleges discrimination based on race, sex, age, color, and retaliation. 6) 1/06/2015 - Claim #GCERBICM2014078822. Alleges discrimination based on sex.

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

None

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R 5.140 and 7.95) ☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing? ☒ Yes ☐ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications? ☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator? ☒ Yes ☐ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a)) ☒ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166) ☒ Yes ☐ No

X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.

Norman Davis, Director, Department of Civil Rights. Mailing address: 210 Martin Luther King, Jr. Blvd.; Room 523, City-County Building; Madison, WI 53703. Email: NDavis@cityofmadison.com. Fax: 608-266-6514. Phone: 608-266-4910.

XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.

Yes. https://www.cityofmadison.com/mayor/apm/3-5.pdf

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
Jessica Price	Sustainability and Resilience Manager	03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statures and EPA regulations.

A. *Signature of Authorized EPA Official	B. Title of Authorized Official	C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.
Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name: Prefix: Dr. First Name: Jessica Middle Name:
Last Name: Price Suffix:
Title: Sustainability and Resilience Manager

Complete Address:

Street1: 210 Martin Luther King, Jr. Blvd.
Street2: Room 403, City-County Building
City: Madison State: WI: Wisconsin
Zip / Postal Code: 53703 Country: USA: UNITED STATES
Phone Number: 608-267-1992 **Fax Number:** 608 267 8671
E-mail Address: jprice2@cityofmadison.com

Payee: *Individual authorized to accept payments.*

Name: Prefix: First Name: Nicole Middle Name:
Last Name: Stevens Suffix:
Title: Executive Assistant to the Mayor

Complete Address:

Street1: 210 Martin Luther King, Jr. Blvd.
Street2: Room 403, City-County Building
City: Madison State: WI: Wisconsin
Zip / Postal Code: 53703 Country: USA: UNITED STATES
Phone Number: 608-266-4611 **Fax Number:** 608-267-8671
E-mail Address: jprice2@cityofmadison.com

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name: Prefix: Dr. First Name: Jessica Middle Name:
Last Name: Price Suffix:
Title: Sustainability and Resilience Manager

Complete Address:

Street1: 210 Martin Luther King, Jr. Blvd.
Street2: Room 403, City-County Building
City: Madison State: WI: Wisconsin
Zip / Postal Code: 53703 Country: USA: UNITED STATES
Phone Number: 608-267-1992 **Fax Number:** 608-267-8705
E-mail Address: jprice2@cityofmadison.com

EPA Form 5700-54 (Rev 4-02)

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: Prefix: Dr. First Name: Jessica Middle Name:

Last Name: Price Suffix:

Title: Sustainability and Resilience Manager

Complete Address:

Street1: 210 Martin Luther King, Jr. Blvd.

Street2: Room 403, City-County Building

City: Madison State: WI: Wisconsin

Zip / Postal Code: 53703 Country: USA: UNITED STATES

Phone Number: 608-267-1992 **Fax Number:** 608-267-8671

E-mail Address: jprice2@cityofmadison.com

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Enhanced Air Quality Monitoring for Communities	66.034	$	$	$ 429,746.00	$ 0.00	$ 429,746.00
2.						
3.						
4.						
5. Totals		$	$	$ 429,746.00	$ 0.00	$ 429,746.00

Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total
	(1) Enhanced Air Quality Monitoring for Communities	(2)	(3)	(4)	(5)
a. Personnel	$ 47,097.00	$	$	$	$ 47,097.00
b. Fringe Benefits	10,630.00				10,630.00
c. Travel	0.00				0.00
d. Equipment	0.00				0.00
e. Supplies	126,700.00				126,700.00
f. Contractual	50,800.00				50,800.00
g. Construction	0.00				0.00
h. Other	194,519.00				194,519.00
i. Total Direct Charges (sum of 6a-6h)	429,746.00				$ 429,746.00
j. Indirect Charges	0.00				$ 0.00
k. TOTALS (sum of 6i and 6j)	$ 429,746.00	$	$	$	$ 429,746.00
7. Program Income	$ 0.00	$	$	$	$ 0.00

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Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1A

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. Enhanced Air Quality Monitoring for Communities	$ 0.00	$ 0.00	$ 0.00	$ 0.00
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	$ 0.00	$ 0.00	$ 0.00	$ 0.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$ 254,916.00	$ 18,769.00	$ 18,769.00	$ 31,109.00	$ 186,269.00
14. Non-Federal	$ 0.00	0.00	0.00	0.00	0.00
15. TOTAL (sum of lines 13 and 14)	$ 254,916.00	$ 18,769.00	$ 18,769.00	$ 31,109.00	$ 186,269.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. Enhanced Air Quality Monitoring for Communities	$ 99,755.00	$ 75,076.00	$	$
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$ 99,755.00	$ 75,076.00	$	$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:

22. Indirect Charges:

23. Remarks:

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Other Attachment File(s)

*** Mandatory Other Attachment Filename:** 1235-Quality Assurance Statement - City of Madison

Add Mandatory Other Attachment | Delete Mandatory Other Attachment | View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment | Delete Optional Other Attachment | View Optional Other Attachment

Project Narrative File(s)

*** Mandatory Project Narrative File Filename:** 1234-Project Narrative_EPA-OAR-OAQPS-22-01_City of Mad

Add Mandatory Project Narrative File | Delete Mandatory Project Narrative File | View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File | Delete Optional Project Narrative File | View Optional Project Narrative File

Latino Health Council

March 20, 2022

Jessica Price, PhD
Sustainability and Resilience Manager
City of Madison | Office of the Mayor
Room 403, City-County Building
210 Martin Luther King, Jr. Blvd.
Madison, Wisconsin 53703

Re: Letter of Commitment, EPA-OAR-OAQPS-22-01

Dear Jessica Price:

We are pleased to submit this letter of commitment on behalf of the Latino Health Council to serve as a partner in the City of Madison's application "Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin" for the U.S. EPA's Enhanced Air Quality Monitoring for Communities grant.

Established in 1996, the Latino Health Council's mission is to promote and support the health and well-being of the Latinx community through education, advocacy, consulting and networking. To achieve this mission, we provide leadership and guidance to organizations planning to reach the Latinx community; assist in providing and promoting health education, screening and early detection programs; promote access and delivery to quality and affordable health care that is culturally and language appropriate; and strengthen partnerships among community organizations to address health needs in the Latinx community.

Latinx are the largest community of color in Dane County, WI and make up close to 7% of the community in Madison. This community is uniquely vulnerable to environmental justice and its health impacts and have been disproportionately impacted by the COVD-19 pandemic. Though employment is high, members of the Latinx community are over-represented in essential jobs, make lower wages, and are more likely to live in poverty. Moreover, 50% of Latinx are uninsured in Wisconsin and face barriers to accessing health information and care. We work to overcome these challenges through programs and partnerships that leverage the strengths of the Latinx community and provide culturally and linguistically relevant support.
To support Latinx health, the Latino Health Council provides information, resources, and services to the Latinx community through events, programming, and media. Our initiatives include:

Nuestra Salud (Our Health) Spanish language health education radio program on La Movida, a 24/7 Spanish radio station. Now in its eighteenth season, this program has an audience of over 40,000 people, reaching not only Latinos in Madison but also all of the surrounding communities. This monthly two-hour program includes a variety of the most important health topics among Latinx presented by professionals, and also includes topic-pertinent resources available in the community.

Latino Chronic Disease Community Conference. Realizing the importance and prevalence of these diseases among Latinos, this conference was developed in 2006. The event draws an audience of over 150 participants.

A plenary on diabetes is presented and then multiple workshops are offered on topics such as cardiovascular disease, nutrition, exercise, stress release, and understanding the U.S. health care system.

Latino Health Teen Bash. Started in 2009 as an original idea of Latino Health Council this event is organized by a collaboration of several community organizations including Latino Health Council, Latino Children and Family Council, and The UW Madison Professional Association of Latinx for Medical School Access (PALMA). This activity aims to reach out to Latinx teens on important health issues presented in a culturally, linguistic, and age-appropriate format. In addition, this event was conceived as an incubator for youth leadership.

Annual Latino Health Fair. This event has been in existence since 1996 and it is the only event of its kind in Dane County and around Wisconsin. The event offers a great opportunity for Latinx not only to come and learn about various community services but also to be screened on a variety of very important preventable diseases including hypertension, diabetes, lipid disorders, and HIV.

As a partner in this project, "Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin," the Latino Health Council will directly assist in the design and performance of the project as described in the Proposal Narrative. As a leading organization in the health and wellbeing ecosystem for Latinx in Madison, we bring the community expertise to ensure that the project's community engagement and education elements and the air quality sensor network itself are inclusive and advance health and environmental equity for our community.

Latino Health Council is especially well-suited to engaging local community members to raise awareness about the connections between air quality and health as well as the information about air quality made available through the project. We will leverage our existing communication channels, activities, and events to engage the Latinx community in this project, including providing information via the Nuestra Salud (Our Health) Spanish health education program; airing public health announcements on La Movida radio; using our Consejo Latino para La Salud Facebook page, including creation of short videos; hosting Facebook live events; distributing materials at Latinx owned businesses; present information and soliciting feedback at regular Latino Health Council meetings (more than 50 regular attendees); and distributing information at in-person Latino Health Council events, such as the Latino Health Fair and the Latino Health Teen Bash.

The Latino Health Council fully supports and looks forward to partnering with the City of Madison to carry out the "Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin" project. The enhanced air quality monitoring, greater community awareness, and stronger partnership network provided by this project are critical for improving air quality and improving the health of our community.

Sincerely,

Patricia Téllez- Girón, M.D.
Co-chair, Latino Health Council of Dane County

Shiva Bidar-Sielaff
Co-Chair, Latino Health Council of Dane County

Office of the Mayor
Satya Rhodes-Conway, Mayor
City-County Building, Room 403
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703
Phone: (608) 266-4611
Fax: (608) 267-8671
mayor@cityofmadison.com
www.cityofmadison.com

March 25, 2022

Jessica Price, PhD
City of Madison
City County Building, Room 403
210 Martin Luther King, Jr. Blvd.
Madison, WI 53703

RE: Letter of Support, EPA-OAR-OAQPS-22-01

Dear Ms. Price:

I am writing to express my strong support for the City of Madison's application to the US Environmental Protection Agency's (EPA's) Enhanced Air Quality Monitoring for Communities grant. The City and multiple partner organizations have come together to submit an application titled, "Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin," that represents our City and community's commitment to environmental justice, health equity, and community resilience.

Through this grant, the City of Madison and its partners aim to install air quality sensors throughout the City, and use every aspect of the project as an opportunity to strengthen community collaborations, increase community and City understanding of air quality issues and their correlations with health disparities, and engage in a justice-centered process of planning for solutions. The City will maintain the air quality sensors after the grant period has expired.

The City is dedicated to justice and equity in our community. While Madison has a reputation for a high quality of life, those benefits are not felt equally across our community. Dane County, where Madison sits, suffers from high rates of racial disparities, including health disparities related to asthma and cardiovascular disease – two conditions made worse by air pollution. The City has been working to address disparities through efforts across the spectrum of City services, from workforce development, economic opportunity, housing and homeownership, arts and culture, community services, and public health. This grant provides us with a needed opportunity to increase those efforts around air pollution and health.

The City is also deeply committed to strengthening community resilience in the face of climate impacts. This EPA grant provides us the opportunity to build the data, community information, and community networks necessary to design solutions that reduce health disparities, increase community resilience, and better prepare our city for the air quality impacts that accompany increasing temperatures due to climate change.

The City is committed to using the information we gain from this process to inform future decision-making to improve air quality and community health – whether in thinking about where to prioritize deployment of zero-emission vehicles, where to focus work to reduce urban heat island impacts, or how to best support impacted community members.

I strongly support the EPA's community-centered approach to addressing air quality issues. I believe Madison and its partners, including Public Heath Madison & Dane County, the University of Wisconsin-Madison, the Foundation for Black Women's Wellness, the Latino Health Council, and The Hmong Institute, have put together a proposal that will achieve its stated goals and set us up for continued learning, partnership, and solutions implementation in the future.

Sincerely,

Satya Rhodes-Conway
Mayor

THE HMONG INSTITUTE

Mission: *Empowering Community Through Education, Health, and Preservation of Hmong Heritage*

4402 Femrite Drive, Madison, WI 53716 www.TheHmongInstitute.org 608-692-6380

March 23, 2022

Ms. Jessica Price, Ph.D.
Sustainability and Resilience Manager
City of Madison, Office of the Mayor
Room 403, City-County Building
210 Martin Luther King, Jr. Blvd.
Madison, WI 53703

Dear Ms. Price,

Thank you for the opportunity to collaborate with your office to engage the Hmong community in the EPA air quality monitoring grant!

We are committed to support this project, if funded, in many ways. The goals of this grant proposal fit well in our mission to empower community through education, health, and preservation of Hmong heritage.

As a strong partner for this grant, we are eager to participate in or directly assist in the design and performance of the project. Our eagerness comes from our desire to advance the health of the Hmong community, because it is important for Hmong parents to understand the connections between air quality and their health. Our roles would include identify geographical areas where most Hmong reside, survey them, and teach them about pollution and air quality. Through culturally and linguistically competent community outreach and education activities with Hmong families, our community engagement efforts will strengthen your project implementation effectively.

This project will be supported by our CEO and part-time project staff. Their activities will include developing bilingual outreach and program materials, phone calls to community members, in-person meetings with Hmong community and agency leaders, attending Hmong student group meetings, conducting community focus groups and surveys, going on Hmong radio programs, attending project team meetings, and completing project coordination and reporting.

Again, we appreciate the opportunity to partner with City of Madison and enhance our existing partnership to better the health of the Hmong communities. Please let us know if you have any questions.

Sincerely,

Mai Zong Vue
Board President

10 YEARS THE FOUNDATION FOR BLACK WOMEN'S WELLNESS 2012 - 2022

Empowering A Generation of Well Black Women www.ffbww.org

3/10/2022

Jessica Price, PhD
Sustainability and Resilience Manager
City of Madison | Office of the Mayor
Room 403, City-County Building
210 Martin Luther King, Jr. Blvd.
Madison, Wisconsin 53703

Dear Jessica Price:

It is our honor to submit this letter of support and partnership on behalf of the City of Madison's application for the ***Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin.*** This project will install air quality monitors throughout Madison in order to identify areas and communities experiencing a disproportionate burden of air pollution, and action towards eliminating air quality issues and reducing health disparities.

Established in 2012, The Foundation for Black Women's Wellness is a Wisconsin based non-profit organization committed to ***Empowering a Generation of Well Black Women***, and to raise the visibility and support of Black women's health as a community and public health priority. We energize, mobilize and support Black women to transform their lives and health through education, advocacy and powerful partnerships. A significant part of this work involves our relentless efforts to eliminate health disparities and other barriers impacting Black women and their families and communities. Each year we engage and serve over 7,000 women across Dane County and Wisconsin through our direct services programming, and thousands more through our advocacy work.

Our mission requires us to work across many issues and domains and with many cross-sector partners as we advocate for social, economic, and environmental policies and practices that protect and secure the health of Black women and their families. This includes supporting efforts like the ***Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin*** that take steps to address and resolve environmental risks and threats to health and safety, and which too often impact Black communities disproportionately.

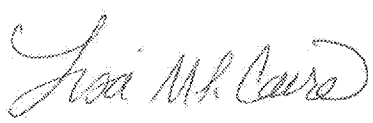
The Foundation for Black Women's Wellness has been fortunate to partner with the City of Madison for many years as we work collaboratively to improve community health and to disrupt stagnant racial health and quality of life disparities. This includes our collective work over the last 4 years on the unprecedented cross-sector Saving Our Babies Initiative to improve the health and birth outcomes of Black mothers and babies; our work as a partner on the 2017 City of Madison Imagine Madison 10 year Comprehensive Plan where we positioned Black women to inform and shape local plans and policies that impact their lives; and as part of a comprehensive #MaskUp campaign working collaboratively with Public Health Madison and Dane County to provide education and masks at the height of the global pandemic.

The Foundation for Black Women's Wellness has the experience, commitment, drive, support, and momentum to successfully partner on this project, with a consistent track record of work and reputational capital that continues to significantly advance public discussion, accountability and action for Black women's health in our county and state. Our work is made stronger by our commitment to centering and mobilizing Black women and their communities into action around public health imperatives by positioning them to shape the present and future health and safety of the communities in which they live, work and play.

We will leverage our experience and deep community relationships to support the ***Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin*** project by providing data framing, and through culturally congruent outreach, education and programming that engages Black Women as both participants and key informants to build relevant and sustainable health equity strategies and solutions to air quality issues. We will leverage our Morning Coffee Virtual programming, robust communication channels (email, social media), and our on-the-ground Community Health Worker team to accomplish this.

Again, we wholeheartedly support the City of Madison's application, and look forward to our continued partnership and powerful impacts we will make together in securing the health of women and families across our City.

Sincerely,



Lisa Peyton-Caire
Founder, CEO & President

PO Box 259831 . Madison, WI 53725 . email: info@ffbww.org . ph: (608) 305-4422

Quality Assurance Statement

Project Title: Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin

Applicant Organization: City of Madison

QuantAQ's MODULAR-PM sensor is existing, commercial technology that has been used by the Bertram Laboratory at the University of Wisconsin-Madison (UW-Madison) since the product was released. The primary advantage of using MODULAR-PM sensors is that they do not require extensive servicing or data management as the primary data is saved to the QuantAQ Cloud servers. The QuantAQ Cloud provides real-time data visualization, fleet diagnostics and summaries, and automated AQ/AC functions.

Prof. Tim Bertram (lead of the Bertram Laboratory at UW-Madison) will provide guidance to the City of Madison on quality assurance and quality control of the sensor network. In this role, Prof. Bertram and a graduate research assistant will review the data analysis products from the QuantAQ Cloud and direct comparisons with data from existing Wisconsin Department of Natural Resources (DNR) air quality monitoring field stations, where control sensors will be collocated. Prof. Tim Bertram and members of the Bertram Laboratory have extensive experience working with ambient air quality measurements, where the Prof. Bertram has been involved with field measurements of aerosol particles for more than 20 years. The Bertram Laboratory at UW-Madison has a wide range of research grade particle instruments and diagnostic and calibration equipment that can be used to assess instrument performance.

For one week prior to their installation throughout the city, all sensors will be collocated together and data will be examined to ensure precision between the sensors and rule out faulty instruments. Once sensors are installed throughout the city, we plan to review PM concentrations at each of the sensor locations on a quarterly (seasonal frequency), where we will compare each $PM_{2.5}$ measurement with the regional average determined as the average of the two, most proximal DNR $PM_{2.5}$ measurements. We expect that the $PM_{2.5}$ measurements will be largely correlated in the mean state with significant, episodic variability attributed to hyper-local emissions. This is the case when comparing the two DNR $PM_{2.5}$ measurements with one another and with measurements on the UW-Madison campus. If the median $PM_{2.5}$ measured by MODULAR-PM is within a factor of 3 of the median of the DNR measurements for the season, and the sensor is reporting data for more than 90% of the measurement period, we would deem the sensor to be in compliance and meet our QA/QC standards. If the medians are more than a factor of 3 in disagreement, we will collocate a second MODULAR-PM sensor at the sensor location for the following season (pending sensor availability). This will permit us to assess if the issue if related to sensor accuracy or if the sampling location is anomalous compared to the regional average.

We are also happy to coordinate with Wisconsin DNR and EPA to ensure the integrity and quality of the sensor network and the data it provides.

Jessica Price, PhD

Email: jprice2@cityofmadison.com
Phone: (608) 267-1992

Education

Doctorate of Philosophy in Environment and Resources May 2016
University of Wisconsin, Madison, WI. Advisor: Janet Silbernagel, PhD

Dissertation Title: Tools for Adaptive Co-management in Changing Forest Landscapes: Landscape Scenario Modeling and Working Forest Conservation Easements in Michigan's Two Hearted River Watershed

Masters of Science in Conservation Biology and Sustainable Development May 2010
University of Wisconsin, Madison, WI. Advisor: Janet Silbernagel, PhD

National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) Fellow

Bachelor of Arts in Biology and Art History May 2006
Lake Forest College, Lake Forest, Illinois

Professional and Research Experience

Sustainability and Resilience Manager August 2021–Present
Mayor's Office, City of Madison, Wisconsin

- Leads policy, program, and strategic development and implementation for sustainability, climate resilience, and environmental justice in the City in collaboration with elected leadership, agencies, utilities, community members and organizations.

Renewable Energy Strategy Lead June 2019–July 2021
Landscape Conservation Ecologist January 2016–June 2019
The Nature Conservancy, New York Division

- Managed a 10-member, multidisciplinary team to develop and implement policies and projects to catalyze the transition to renewable energy and reduction in greenhouse gas emissions in New York, including strategic planning, managing an ~$700,000 annual budget, fundraising, and communications
- Led multiple projects that apply multi-disciplinary research, community engagement, and inter-sectoral collaboration to provide science and solutions to advance climate change mitigation and adaptation, such as The Long Island Solar Roadmap project and Building Our Clean Energy Future: A Toolkit for Supporting Solar and Wind Projects.

Graduate Research Assistant, Landscape Conservation Lab August 2008–May 2016
University of Wisconsin–Madison

- Developed and applied a collaborative landscape scenario modelling approach to compare the ability of alternative management scenarios to achieve landscape conservation goals in two study areas – the Two Hearted River watershed and the Wild Rivers Legacy Forest
- Established partnerships with local land management and conservation experts in the study areas to build capacity for cooperative scenario development, modeling, and decision-making

Teaching and Course Development Assistant January–May 2014, 2015
Applications of GIS in Natural Resources
Janet Silbernagel, Professor, Landscape Architecture & Environmental Studies, University of Wisconsin at Madison

Editorial Assistant August 2014–February 2015
University of Wisconsin – Madison Division of Extension's Natural Resources Institute

Teaching Assistant September–December 2012, 2013, 2014
Biocore 302 Ecology Evolution and Genetics Lab
Janet Batzli, Associate Director, Biocore Program, University of Wisconsin at Madison

Graduate Intern, Forest Scenarios Project May 2009–May 2010
Nicholas Miller, Director of Conservation Science, The Nature Conservancy, Wisconsin Field Office

Science Writer and Administrative Coordinator August 2006–August 2008
Rustem F. Ismagilov PhD, Department of Chemistry, The University of Chicago

Selected Publications

Price, J., Delach, A., Leu, K., Morris, C., Schelly, C., Thapaliya, R. **2021**. Long Island Solar Roadmap: Advancing Low Impact Solar in Nassau and Suffolk Counties. The Nature Conservancy and Defenders of Wildlife. New York, NY.

Schelly, C., Prehoda, E., Price, J., Delach, A., Thapaliya, R. **2020**. "Ratepayer Perspectives on Mid- to Large-Scale Solar Development on Long Island, NY: Lessons for Reducing Siting Conflict through Supported Development Types," *Energies* 13(21), 5628.

Schelly, C., Price, J., Delach, A., Thapaliya, R., Leu, K. **2019**. "Improving solar development policy and planning through stakeholder engagement: The Long Island Solar Roadmap Project," *The Electricity Journal* 32(10):106678.

Price, J., Silbernagel, J., Miller, N., Swaty, R. **2015**. "Collaborative landscape modeling reveals potential landscape change under alternative management strategies and natural disturbance regimes in the Two Hearted River watershed, Michigan USA," *Landscape Ecology* 31:1093–1115.

Swearingen, A., Price, J., Silbernagel, J., Swaty, R., Miller, N. **2015**. "State-and-transition simulation modeling to compare outcomes of alternative management scenarios under two natural disturbance regimes in a forested landscape in northeastern Wisconsin, USA," *AIMS Environmental Science* 2(3): 737-763.

Nixon, K., Silbernagel, J., Price, J., Miller, N., Swaty, R. **2014**. "Habitat Availability for Multiple Avian Species Under Modeled Alternative Conservation Scenarios in the Two-Hearted River Watershed in Michigan, USA," *Journal for Nature Conservation* 22(4): 302-317.

Price, J.M., Silbernagel, J.M., Miller, N., Swaty, R., White, M, Nixon, K. **2012**. "Eliciting Expert Knowledge to Inform Landscape Modeling of Conservation Scenarios," *Ecological Modelling* 229: 76-87.

Selected Presentations

"Cultivating an engaged stakeholder group: Learning from the Long Island solar roadmap," Northwest Knowledge Network (NKN) at the University of Idaho. 2021. *Presentation.* https://doi.org/10.7923/DJD6-E081

"A Framework for Fostering Collaboration Among Stakeholders through Participatory Scenario Modeling," International Association for Landscape Ecology – North America (IALE-NA) Virtual Conference. May 11-14, 2020. *Presentation.*

"Improving Solar Development Policy and Planning through Stakeholder Engagement: The Long Island Solar Roadmap Project," 9th Annual Energy Policy Research Conference, Boise, ID. September 30, 2019. *Presentation.*

"Building Bridges: How to create resilient transportation infrastructure through partnerships & other essential ingredients," National Climate Adaptation Forum, Madison, WI. April 23, 2019. *Poster.*

"Long Island Solar Roadmap," Long Island Smart Growth Summit, Woodbury, NY. November 2018. *Presentation.*

"Creating a Solar Roadmap: A stakeholder-driven approach to low-impact solar energy siting," The Nature Conservancy Global Science Gathering, Houston, TX. November 14, 2018. *Poster.*

"So what does it mean? Using story maps to communicate landscape modeling results with stakeholders in the Two Hearted River watershed," Wisconsin Wetlands Association's 20th Anniversary Wetland Science Conference, Madison, WI. February 25, 2015. *Presentation.*

"Spatial Narratives from Michigan's Upper Peninsula: Map Based Storytelling to Inform Forest Management in a Changing Climate," 2013 University of Wisconsin Geospatial Summit, Madison, WI. April 25, 2013. *Presentation.*

Honors and Awards

Rising Star Alumni Award, Nelson Institute for Environmental Studies, 2021
Staff Peer Award, The Nature Conservancy in New York, 2016
Communication-B Teaching Assistant Fellow, University of Wisconsin-Madison, 2015
NASA-MSU Professional Development Award, 2012
CHANGE-IGERT Fellowship, National Science Foundation (NSF), 2010
Graduate Student Travel Grant, Nelson Institute for Environmental Studies, 2010
Doris Duke Conservation Fellowship, Doris Duke Charitable Foundation, 2009 & 2010

Current Professional Memberships and Service

Urban Sustainability Directors Network	September 2021–Present
American Society of Adaptation Professionals	April 2019–Present
International Association for Landscape Ecology–North America	April 2010–Present

Ex. 6 Personal Privacy (PP)

STEVENSON, ALIA

SKILLS & ABILITIES	Health Equity Subject Matter Expertise Strategic Partnerships & Stakeholder Engagement Communication & Facilitation Fund Development, Grant Writing & Reporting
EXPERIENCE	**CHIEF PROGRAMS OFFICER, THE FOUNDATION FOR BLACK WOMEN'S WELLNESS** April 2020 - Current • Strategic responsibility for developing compelling and impactful programming to advance the Foundation of Black Women's Wellness' Vision and Mission. • Expands and manages relationships with partner organizations and serves as an ambassador and spokesperson before a range of stakeholders and in the media. • Leads strategic fund development strategy and implementation plan in alignment with organization mission and vision.
	DIRECTOR, NINA COLLECTIVE January 2020 - Current • Supports organizations, institutions, and individuals committed to equity and inclusion as they advance their own internal change process and racial equity initiatives through: capacity building, assessment, advising, and coaching.
	HUMAN RESOURCES ORGANIZATIONAL HEALTH AND DEVELOPMENT MANAGER, CITY OF MADISON June 2018 – April 2020 • Manages implementation of the City's learning and talent management efforts, professional development programs, leadership development, and workplace culture and wellness initiatives. • Provides expertise on data-informed decision-making to lead efforts aimed at racial equity, social justice, and workplace inclusion. Facilitates use of Equitable Hiring Tool and Racial Equity and Social Justice Assessment.
	POLICY, PLANNING & EVALUATION SUPERVISOR, PUBLIC HEALTH MADISON & DANE COUNTY May 2017- June 2018 • Leads development of partnerships to increase community capacity. Facilitates development of multi-sector collaborative strategies. Assures community engagement. Supports staff and stakeholders in building power in communities. Supports community-led mobilization to gain resources. • Designs and delivers health and racial equity education and technical assistance. Delivers targeted, culturally appropriate information. Develops and disseminates research and reports.

	HEALTH EQUITY COORDINATOR, PUBLIC HEALTH MADISON & DANE COUNTY November 2015-May 2017 • Leads agency-wide capacity building to embed health and racial equity principles into operations. Develops and leads an agency-wide Health and Racial Equity team to increase capacity to deliver culturally responsive services. • Leads development of internal and external relationships.
	DIVERSITY & COMMUNITY RELATIONS COORDINATOR, AGRACE February 2014- November 2015 • Leads development of partnerships. Improves access for diverse and underserved patients, volunteers, and employees through education, community outreach, and policy change.
EDUCATION	**UNIVERSITY OF WISCONSIN – MADISON – MS REHABILITATION COUNSELING PSYCHOLOGY** 2004 **UNIVERSITY OF WISCONSIN – MADISON – BA JOURNALISM – PUBLIC RELATIONS** 2000 **UNIVERSITY OF WISCONSIN – MADISON – SCHOOL COUNSELING** 2009
LEADERSHIP	**RACIAL JUSTICE CERTIFICATE, YWCA - MADISON**, 2014 **NEHEMIAH'S AFRICAN AMERICAN LEADERSHIP CAPACITY & DEVELOPMENT INSTITUTE,** 2017 **HUMAN IMPACT PARTNERS' HEALTH EQUITY AWAKENED FELLOWSHIP**, 2018 **BLOOMBERG HARVARD CITY LEADERSHIP INITIATIVE,** 2019
VOLUNTEER	**CO-CHAIR, BLACK MATERNAL CHILD HEALTH ALLIANCE**, September 2020 – Current **MEMBER, DANE COUNTY HEALTH COUNCIL,** September 2020 – Current **MEMBER, UPH MERITER FOUNDATION BOARD**, February 2021 – Current **MEMBER, NACCHO HEALTH EQUITY AND SOCIAL JUSTICE SUBJECT MATTER EXPERT WORKGROUP**, July 2021 – Current **MEMBER, DOWNTOWN MADISON, INC,** January 2022 - Current
PUBLICATIONS	**LISTENING TO BLACK WOMEN: THE CRITICAL STEP TO ELIMINATING WISCONSIN'S BLACK BIRTH DISPARITIES, WISCONSIN MEDICAL JOURNAL, CO-AUTHOR, 2021**

WISCONSIN
UNIVERSITY OF WISCONSIN-MADISON

March 25, 2022

Dear Dr. Price,

We are very pleased to support your proposed EPA project, "Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin."

The Bertram Group in the Department of Chemistry at the University of Wisconsin-Madison has extensive experience in outdoor and indoor air quality. We have developed both compact, autonomous instruments for the characterization the spatial and temporal variability in air quality and high precision instrumentation for detailed analyses. We have worked with industrial partners to characterize spatial and temporal variability in indoor and outdoor air quality using novel and commercially available instruments. For this project, the Bertram Group will work with the Leadership Team to determine the optimal position of the sensors within the City of Madison. Prior to sensor deployment, the Bertram Group will confirm that the commercially available sensors are operational and assist the City of Madison Streets Division in sensor deployment when possible. Following deployment of the sensor network, the Bertram Group will review initial data from the sensors, analyzed by the City of Madison, to confirm each node is operational. The Bertram Group will review the first season of particle measurements with the Leadership team. Much of this work will be carried out by a graduate research assistant under supervision my (Bertram) supervision. In addition to funding provided by EPA for this project, work will also be supported by discretionary funds of the PI (Bertram) and the education and outreach activities of Prof. Bertram's existing NSF grants.

The Holloway Group in the Nelson Institute Center for Sustainability and the Global Environment at the University of Wisconsin-Madison focuses on advancing air quality research to inform Science and Policy. In addition, I (Holloway) serve as the Team Leader for the NASA Health and Air Quality Applied Science Team (HAQAST). For this project, the Holloway Group will work with the Leadership Team to compare monitoring data with complementary air quality information sources, including satellite data and satellite-derived products, as well as annual average $PM_{2.5}$ from the Intervention Model for Air Pollution (InMAP). This work will be carried out by graduate and undergraduate student researchers supported on complementary funding, including discretionary funds of Dr. Holloway and stakeholder engagement activities of the NASA Health and Air Quality Applied Sciences Team.

Best Regards,

Tracey Holloway
Professor
Nelson Institute for Environmental Studies and
Department of Atmospheric and Oceanic Sciences
University of Wisconsin—Madison

Timothy Bertram
Professor
Department of Chemistry and Atmospheric and
Oceanic Sciences University of Wisconsin—Madison

Public Health
MADISON & DANE COUNTY
Healthy people. Healthy places.

Environmental Health Division
2300 South Park Street, Room 2010
Madison, WI 53713

Phone (608) 242-6515
Animal Services Voicemail (608) 267-1989
Fax (608) 242-6435
www.publichealthmdc.com

March 24, 2022

Dear Jessica Price (Sustainability and Resilience Manager, City of Madison),

I write on behalf of the Environmental Health Division of Public Health Madison & Dane County (PHMDC) in support of the City of Madison's proposal to the EPA for a grant to fund the Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin. We strongly support this grant application and the focus on reducing health disparities among City of Madison areas experiencing particulate matter air pollution by installing air quality sensors throughout the City and engaging the community in education for improving air quality.

Through this letter, we acknowledge specific roles and responsibilities we will fulfill in this partnership. In the event this proposal is funded, we would expect our role in Building Sensor and Community Partnership Networks for Air Quality in Madison to include:

- Forming a genuine partnership to reduce health disparities in our community, especially in our BIPOC neighborhoods.

- PHMDC Epidemiologist, Jeff Lafferty, will participate and give feedback on the methodology, data analysis and interpretation of data findings to develop insights about neighborhood air quality, potential public health implications, and possible interventions.

We look forward to working with you in eliminating heath disparities in our community and achieving health equity.

Sincerely,

Bonnie Lynn Koenig

Bonnie Lynn Koenig

Director of Environmental Health

Public Health Madison & Dane County

Patricia A.Y. Tellez-Giron Salazar, MD

Ex. 6 Personal Privacy (PP)

EDUCATION

1997-2000	Family Medicine Residency. Department of Family Medicine and Community Health (formerly Department of Family Medicine), UW School of Medicine and Public Health, Madison, Wisconsin
1987-1993	Medical Doctor Degree, National University of Mexico, School of Medicine. Graduated with Honors, received outstanding academic performance recognition from former president of Mexico, Carlos Salinas de Gortari
1984-1987	Science degree, Medical school Preparatory "Preparatoria Antonio Caso," UNAM, Mexico.

CERTIFICATION

2017-2027	Board Certification: American Board of Family Medicine

POSITIONS HELD

2007-present	Associate Professor, UW School of Medicine and Public Health (SMPH), Department of Family Medicine and Community Health. Madison, Wisconsin
2000-2007	Assistant Professor, UW SMPH, Department of Family Medicine and Community Health. Madison, Wisconsin
1997-2000	Resident, UW Health Wingra Clinic, UW SMPH, Department of Family Medicine and Community Health. Madison, Wisconsin
1996 (May-Sept)	Clinic preceptor, La Clinica de Los Campesinos and Wild Rose Hospital and Clinic. Wild Rose, Wisconsin
1993-1996	Medical interpreter for: Dane County Health Department, Dean Clinics and Meriter Hospital. Madison, Wisconsin
1992-1993	Clinic Medical Director, Health Department. Zacatecas, Mexico
1991-1992	Intern, Hospital General de Mexico. Mexico City, Mexico

CURRENT COMMUNITY SERVICE AND VOLUNTEER ACTIVITIES

2002-present	Chair. Latino Health Council (LHC) of Dane County. Madison, Wisconsin
2020-present	Dane County Latinx Community COVID Education Campaign
2015-present	Contributor. UNITY Member's newsletter. Health education topics in Spanish.
2015-present	Consultant and Contributor. Radionovela. Agrace Hospice. End of life services and Latinos.
2009-present	Medical Director. Latino Health Teen Bash. Dane County. Madison, Wisconsin

2008-present	Medical Director/Presenter. Latino Mental Health Summit. Dane County. Madison, Wisconsin
2007-present	Contributor. Medical column, *Voz Latina*. Biweekly edition. Dane County. Madison, Wisconsin *Medical articles are presented in a very simple and colloquial way.*
2006-present	Medical Director/Presenter. Latino Chronic Disease Summit. Dane County. Madison, Wisconsin
2005-present	Member. Latino Advisory Delegation, United Way of Dane County. Madison, Wisconsin *This delegation is appointed to serve as an advisory board to United Way regarding the provision of adequate services to fulfill the needs of the Latino community of Dane County on various areas including, health, housing, public safety, immigration, education, etc.*
2004-present	Medical Director/Presenter. "Nuestra Salud" Spanish health education radio program. Dane County. Madison, Wisconsin *With an audience of approximately 40,000 listeners, this monthly two-hour radio program covers health topics and related community resources.*
2001-present	Annual Latino Health Fair. Madison, Wisconsin *This event hosts over 500 participants annually providing general health screenings and an abundance of health education.*
2000-present	Member of the Latino Support Network (La Sup). Madison, Wisconsin *La Sup is the main organization of professional Latinos working for and with the Latino Community in Dane County.*
1993-present	Lecturer. Numerous health related topics for the Dane County Latino Community. Madison, Wisconsin *Guest speaker at churches, schools, community centers, etc.*
1993-present	Assist with coordination, transportation, lectures, activities and newsletter, at the North East Side Coalition for the Elderly Hispanic Support Group. Madison, Wisconsin

SELECTED HONORS AND AWARDS

2020 Time magazine: "27 People bridging Divides Across America"
2018 Community Leader of the Year award. La Movida radio station
2018 Mentorship recognition award. SMPH, Office of Multicultural Affairs
2017 Madison Magazine "M List for 2017 Health innovation"
2016 Arnold P Gold Foundation Humanism in Medicine Award
2016 Faculty and Staff Equity and Diversity Award. University of Wisconsin (UW), School of Medicine and Public Health. Madison, Wisconsin
2012 Dr. Brenda Pfaehler Award of Excellence. UW Center for Educational Opportunity. Madison, Wisconsin
2011 City-County Reverend Dr. Martin Luther King, Jr. Humanitarian Award. Dane County, Madison, Wisconsin
2008 UW Madison Outstanding Women of Color Award. Madison, Wisconsin

I. Cover Page

Project Title
Building Sensor and Community Partnership Networks for Air Quality in Madison, Wisconsin

Applicant Organization: City of Madison
Address: 210 Martin Luther King Jr Blvd, Madison, WI 53703
Primary Contact: Jessica Price, Sustainability and Resilience Manager, 608-267-1992, jprice2@cityofmadison.com

DUNS number: 076147909
Set-Aside: No set-aside

Brief Description of the Applicant Organization: The City of Madison is a local government entity serving the nearly 270,000 residents of Wisconsin's second largest and fastest growing city. Our Mission is to provide the highest quality service for the common good of our residents and visitors, with a commitment to fairness, justice, and equal outcomes for all. Our Sustainability and Resilience program focuses on advancing environmental sustainability, climate resilience, and environmental justice.

Project Partner(s)
Foundation for Black Women's Wellness. Primary Contact: Alia Stevenson, astevenson@ffbww.org
Latino Health Council. Primary Contact: Dr. Patricia Téllez-Girón, patricia.tellez-giron@fammed.wisc.edu
The Hmong Institute: Primary Contact: Peng Her, peng.her@thehmonginstitute.org
University of Wisconsin at Madison. Primary Contact: Tim Bertram, timothy.bertram@wisc.edu
Public Health Madison and Dane County. Primary Contact: Jeffrey Lafferty, jlafferty@publichealthmdc.com

Project Location: Madison, Wisconsin. Zip codes: 53593, 53703, 53704, 53705, 53706, 53713, 53714, 53715, 53716, 53717, 53718, 53719, 53726, 53792

Air Pollutant Scope:
In this project, we focus on high spatial and temporal measurements of size resolved particulate matter concentrations (i.e. PM_1, $PM_{2.5}$, and PM_{10}).

Budget Summary:

EPA Funding Request	Total Project Cost
$429,746	$429,746

Project Period: November 2022 - October 2025

Short Project Description: The City of Madison will lead a collaborative project to install a city-wide network of air quality sensors to provide real-time, ground-level, publicly accessible information on particulate matter pollution at the neighborhood scale. The team will engage the Madison community through multiple avenues to raise awareness about the connections between air quality and health, with a focus on BIPOC communities, and ensure that community input is reflected in the design and deliverables of the project. Using data from the network, we will characterize the spatial distribution of PM pollution across the city, identify neighborhoods experiencing the greatest levels of PM air pollution, and work with the community to determine next steps for improving air quality and protecting the health of residents.

II. Workplan

Section 1 – Project Summary and Approach

A. Overall Project

This project aims to install air quality sensors throughout the City of Madison to identify areas experiencing particulate matter (PM) air pollution and support greater awareness, education, and action to address air quality and health disparities. EPA funding would be used to 1) create a city-wide network of air quality sensors to provide up-to-date and publicly accessible information, informed by city residents and organizations, 2) engage the Madison community through multiple avenues to raise awareness about the connections between air quality and health, with a focus on BIPOC communities, 3) identify areas experiencing the greatest levels of PM air pollution, and 4) begin community outreach, education, and engagement efforts to collaboratively determine community needs and next steps for improving air quality and protecting the health of residents.

This project will help EPA achieve Objective 4.1, "Improve Air Quality and Reduce Localized Pollution and Health Impacts" outlined in the draft FY 2022-2026 EPA Strategic Plan.

POLLUTANT SCOPE

In this project, we focus on high spatial and temporal measurements of size resolved particulate matter concentrations (i.e. PM_1, $PM_{2.5}$, and PM_{10}). PM measurements are made in real-time and reported to a publicly assessable database for direct access by city residents and community partners. Our focus on PM as a key metric for air pollution is a driven by: 1) well-established connections between outdoor exposure to PM and adverse respiratory health effects,[1,2] 2) strong in-city variability in particle concentrations that have the potential to lead to significant health disparities,[3] and 3) availability of a robust and quantitative sensing platform (QuantAQ MODULAR-PM) for real-time measurements of PM_1, $PM_{2.5}$, and PM_{10}.

LEADERSHIP TEAM

- **City of Madison (the City):** Dr. Jessica Price, City of Madison Mayor's Office - Project Manager
- **Public Health Madison and Dane County (PHMDC):** Jeffery Lafferty, Public Health Madison and Dane County - Environmental Epidemiologist
- **University of Wisconsin – Madison (UW-Madison):** Dr. Tim Bertram, Departments of Chemistry and Atmospheric and Oceanic Sciences; Dr. Tracey Holloway - Department Atmospheric and Ocean Sciences and Nelson Institute for Environmental Studies
- **Foundation for Black Women's Wellness (FFBWW)*:** Alia Stevenson, Chief Programs Officer
- **Latino Health Council (LHC)*:** Dr. Patricia Téllez-Girón, MD, Chair of Latino Health Council
- **The Hmong Institute*:** Peng Her, CEO

* These three non-profit community organizations are the community partners in this project.

PROPOSED ACTIVITIES

Task 1. Project Management and Reporting: The Project Manager, in collaboration with the Leadership Team, will finalize a project work plan and execute contracts for subawards to project partners; produce quarterly reports detailing activities, deliverables and milestone, as outlined in (Section 4c); plan and execute all Leadership Team meetings, coordinate project activities, and track progress; and coordinate activities by City staff to fulfill the obligations of this grant. All members of the Leadership Team will participate in regular team meetings.

Task 2. Engage Community in Project & Sensor Network Design: The Leadership Team will plan and execute a series of community engagement activities aimed at 1) informing Madison residents about the creation of the city-wide air quality sensor network, 2) raising awareness about the connections between air quality and health, 3) gathering information from residents to inform the design of the air quality sensor network (Task 3), and 4) learning the best ways to inform and collaborate with community members once air quality data from the sensor network is available and areas of greatest concern have been identified (Task 4).

City of Madison (the City) will create a web page for this project on its website where the public can access information about project aims, progress, and outputs. The website will be updated during the project and beyond.

The City will hold 3-5 Open House events to achieve aims 1-4 described above by reaching a broad spectrum of the community. Community partners – Foundation for Black Women's Wellness (FFBWW), Latino Health Council (LHC), and the Hmong Institute – will provide guidance on the best design for each Open House's audience, location, and content to ensure they achieve the aims described above. Community partners will also promote the Open Houses through their own communication channels.

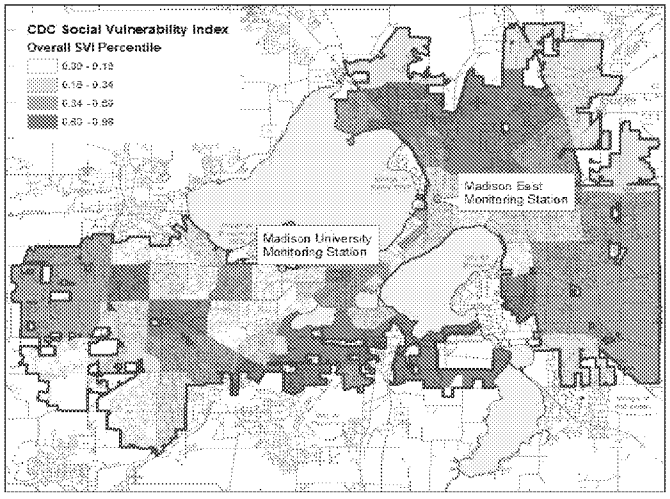


Figure 1. Map of the City of Madison showing census tracts and the location of WI DNR air monitoring stations. Census tracts show CDC overall social vulnerability ranking within Wisconsin – darker colors indicate greater social vulnerability.

Task 3. Design and Install a City-wide PM Sensor Network: The project will install a city-wide PM sensor network, with at least one sensor located in each of Madison's 68 census tracts. This network will provide full coverage PM monitoring across the city, providing air quality data to underserved neighborhoods and vulnerable populations sensitive to air quality impacts that might not be geographically clustered, such as the elderly, children, and those with pre-existing medical conditions. **Figure 1** shows the relative overall social vulnerability of Madison's census tracts relative the rest of Wisconsin, according to the CDC's Social Vulnerability Index.[4]

The project will use MODULAIR-PM (QuantAQ) air quality sensors, which combine a commercial nephelometer with an optical particle counter to achieve high-time resolution (1 min) measurements of PM_1, $PM_{2.5}$, and PM_{10}. The sensor package is attached to the cellular network enabling real-time data to be displayed for community decision making and awareness.

Professor Tim Bertram at the University of Wisconsin-Madison (UW-Madison), with input from the Leadership Team, will design the spatial arrangement of air quality sensor network to provide optimal data on ground-level particulate matter. Sensors will be installed on city-owned light and traffic signal poles located by the City's Streets Division. The location of the sensors within the city will be determined by balancing best practices for monitoring air pollution concentrations that are representative of a census track with specific community input from Task 2. A sensor will also be placed at each of the two Department of Natural Resources' (DNR) air quality monitoring stations in Madison to enable calibration and quality assurance.

Community members will be invited on-site for installation of 3-5 sensors. At these events, attendees will get the opportunity to learn how the sensors work, why the network is important, and how the air quality information it provides can be useful to them.

Once installed, real-time air quality data will be provided by QuantAQ Cloud. During the commissioning phase of network deployment, PM data will be monitored by the Bertram Lab at UW-Madison to ensure the network is operating as designed (see Section 5). Data will be displayed and available for download on the project web page.

Task 4. Identify, Map, and Share the Air Quality Story: Real-time measurements of PM concentrations from the city-wide network of MODULAIR-PM sensors will be used to characterize the spatial distribution of air pollution across the city. Following the initial 2-week QA/QC commissioning period, we will collect a season (ca. 3 months) of continuous measurements. Prof. Tim Bertram and Prof. Tracey Holloway at UW-Madison will guided analysis of the spatial patterns in PM_1, $PM_{2.5}$, and PM_{10} on the neighborhood scale. Measurements from the sensor network will be compared with regional measurements of $PM_{2.5}$ made from the two existing DNR air quality monitoring stations in Madison. This initial analysis will provide key insight on the spatial and temporal availability in PM within the city and the frequency at which we want to report observations to the project website (e.g., 1 minute, 1 hour, daily air quality

updates) and the context (e.g., seasonal average) that we want to report these measurements with. Importantly, this analysis will identify the areas of Madison experiencing the greatest levels of PM pollution.

To share these findings, the City will create a publicly accessible Story Map that enables users to interact with findings from the air quality analysis, along with sociodemographic data, to see how air pollution is affecting their neighborhood and city. The Story Map will include information about the links between health, environmental justice, and air pollution as well as stories about air quality and health from members of the community. The Story Map will be available in English, Spanish, and Hmong on the project web page. The map will highlight which neighborhoods and populations are most impacted by poor air quality. Public Health Madison and Dane County (PHMDC) will provide health information on the map and work with the Leadership Team to provide insight into the upstream variables affecting air quality and the downstream health implications in Madison neighborhoods. Community partners will help ensure the map is accessible to and inclusive of Madison's diverse communities.

Community partners and PHMDC will communicate these findings and their significance for community health and environmental justice using a variety of formats to ensure effectiveness for different audiences, including print, web, audio, video or events. UW-Madison will provide technical support in these efforts as needed.

Task 5. Collaboratively Identify Needs and Next Steps: The City will hold a second round of 3-5 Open House events to share findings on air quality with the community to begin a generative conversation about what the data means, the needs of the communities most impacted by poor air quality, and next steps for improving air quality and protecting the health of residents. These Open House events will focus on connecting with communities in the areas of Madison experiencing the greatest levels of air pollution. Input and ideas generated at Open Houses will be synthesized by the Leadership Team and shared back out to the community on the projects website.

Community partners and PHMDC will provide guidance on the best design for each Open House's audience, location, and content and promote the Open Houses through their own communication channels.

Task 6. Information transfer and dissemination: The City, PHMDC, and UW-Madison will use their communication channels to share the project's approach and outputs, including publicly accessible air quality data, the Story Map, and other materials, to enable other local and state governments and community organizations to replicate this approach. The Project Manager, with input from the Leadership Team, will create a final project report written for EPA upon completion of the project.

B. Project Significance

Particulate matter air pollution, especially fine particles ($PM_{2.5}$), poses serious risks to respiratory and cardiovascular health. The size of this contaminant poses a barrier for removal by the natural defenses of the human body leading to the settling of the material in the lungs. Exposure to $PM_{2.5}$, even short term peaks or spikes in air pollution, can lead to the increased risk of human respiratory and cardiovascular diseases with a greater disease burden among vulnerable populations. In Madison, there are two regulatory-grade air quality sensors - the Madison University station and the Madison East station operated by the Wisconsin Department of Natural Resources (DNR) (Figure 1). Over the period 2018-2020, the Madison University station recorded the second highest annual $PM_{2.5}$ and the highest 24-hour $PM_{2.5}$ of all sensors in Wisconsin DNR's ambient air monitoring network. The Madison East station recorded the fifth highest annual $PM_{2.5}$ and the third highest 24-hour $PM_{2.5}$ in the state.[5] According to EPA EJScreen, the City of Madison is in the 84th percentile for $PM_{2.5}$ in compared to the rest of the state.

While these regulatory sensors give a broad understanding of air pollution in our region, they do not have the spatial resolution to identify differences in exposure to PM across Madison's neighborhoods. Importantly, these sensors are not located in or near many of Madison's underserved communities (**Figure 1**). Further, remotely sensed data on NO_2 shows pockets of air pollution are not concentrated near existing regulatory air quality sensors. The absence of air quality data across most of Madison, particularly in underserved communities, contributes to a lack of awareness and community capacity focused on air quality and health related outcomes. Addressing these issues requires targeted, data informed strategies and partnerships.

Exposure and vulnerability to air pollution are experienced more acutely by low to moderate income residents, BIPOC communities, people with disabilities, children, and the elderly. In Wisconsin, BIPOC and low income communities are disproportionately burdened by respiratory and cardiovascular illnesses. Black Wisconsinites have an asthma prevalence nearly 1.5x higher,[6] a rate of asthma-related hospitalizations 6x higher,[7] and are almost 3x more likely to die from asthma than white Wisconsinites.[3] Asthma-related emergency room visits are 6x times higher for black children.[8] Hispanic Wisconsinites have an asthma-related hospitalization rate 1.6x higher than non-Hispanic Wisconsinites,[4] and emergency room visits for Hispanic children are twice that of white children.[5] Adults in the lowest income group have almost 2.5x the rate of asthma as those in the highest income group. And Dane County, where the City of Madison is located, has the 10th highest asthma hospitalization rate in the state.[3]

Heart disease also disproportionately impacts Wisconsin's black population. Black Wisconsinites are hospitalized due to heart failure at a rate 5.6x higher and have a death rate due to heart disease 1.6x the rate of white Wisconsinites.[9] The COVID-19 pandemic has also disproportionately impacted Dane County's BIPOC communities, with black and Latinx residents' infection rates doubling, tripling and nearly quadrupling the rates of white residents during surges.[10]

Madison is also home to a large portion of Wisconsin's Hmong population, with Hmong (or Hmoob) being the third most commonly spoken language in the city and state. Hmong residents face health disparities and limited access to health information and care due to many factors, including linguistic isolation, low wages and income, limited access to government services, and discrimination. Communities of color, including the Hmong community, and low-income residents were disproportionality impacted by the COVID-19 pandemic, experiencing greater economic hardship, housing insecurity, and more challenges accessing and affording healthcare.

Real time, ground-level information from a spatially distributed PM sensor network, combined with satellite data, will enable understanding of locations, magnitudes, and potential sources of PM and development of short and long term solutions by multiple actors to improve air quality and protect community health. Community partnerships and engagement, with a focus on BIPOC communities, will ensure the sensor network and findings on air pollution are responsive to communities concerns and needs, and that resources, education, and support reach the community members most vulnerable to and impacted by PM pollution.

This project will not only create a sensor network that provides valuable air quality data but will also build local capacity to interpret and benefit from that information, especially underserved communities. In addition, this network and approach can be used as a model for enhanced air quality monitoring in other medium sized cities, provide valuable data on air quality to fill in information gaps. Midwest air quality and especially winter air quality issues (where PM is most central) have been historically understudied.

Section 2 – Community Involvement

A. Community Partnerships

This project brings together a Leadership Team of community partners and supporting organizations with the range of expertise and experience necessary to successfully carry out this project. The City will lead this project, and PHMDC and UW-Madison will provide capacity, expertise, and resources on project management, atmospheric science, air quality monitoring, and public health information and communication.

Three community partners will serve on the Leadership Team. Each is dedicated to and has extensive experience in providing resources, programming, and communications to advance the health and wellbeing of Madison's BIPOC communities.

The Foundation for Black Women's Wellness is a Wisconsin based non-profit organization focused on eliminating health disparities and other barriers impacting the lives of Black women, their families, and communities. Their mission is to energize, mobilize, and support Black women to transform their health and their lives through education, advocacy, support, and powerful partnerships. FFBWW has robust health communication and education programming and a network of Wellness Ambassadors that serve as health communicators, informants, and navigators in the community.

The Latino Health Council is a non-profit composed of over 40 key health care related organizations and agencies throughout Madison and Dane County. LHC's mission is to promote and support the health and well-being of the Latino community through education, advocacy, consulting and networking. They engage the Latinx community in health and wellbeing through events, programming, and media, including a weekly Spanish language radio program focused on health.

The Hmong Institute is a Madison-based, non-profit community organization focused on empowering the Hmong community through education, health, and preservation of Hmong heritage. They provide education, health, community building, and economic and professional development assistance and programming to overcome cultural, language, and access barriers for the Southeast Asian and immigrant communities in Dane County. Health-focused programs include the Annual Hmong Health Summit and trainings for health service providers and more.

Each community partner will serve as a member of Leadership Team, providing input, expertise, and outreach to make sure the project is designed & delivered in ways that engage and meet the needs of Madison's diverse population. Community partners will:

1. Advise on all elements of the project design, including community engagement (Tasks 2 and 5), design of the sensor network (Task 3), and resources to tell the air quality story (Task 6).
2. Perform outreach through their existing networks and avenues to raise awareness about the project and promote community participation in project activities defined in Tasks 2, 3, and 5.
3. Use their platforms, programs, and events to raise awareness about the sensor network and available air quality data as well as the connections between air quality and health.

For this work, community partners are included as sub-recipients of the grant as shown in Section 7.

Participation in this project benefits community partners by growing their capacity; building and strengthening connections with the projects' other partners; and providing culturally relevant and accessible data, maps, and other resources that they can use in their own programming. Ultimately, these gains strengthen the services each offers to their communities and helps each organization achieve their mission of improving health outcomes in their respective communities.

B. Community Engagement

Discussed above in Sections 1.A and 2.A, three community partners will serve on the project's Leadership Team and provide input and expertise to make sure the project is designed and delivered in ways that engage and meet the needs of Madison's diverse population. These partners have strong ties to Madison's BIPOC communities.

Together, the Leadership Team will develop a public participation plan following the best practices defined in the Public Participation Resource Guide developed by the City of Madison's Racial Equity and Social Justice Initiative.[11] As described in Section 1A, members of the community will be invited to provide input and participate in the project through initial Open House events (Task 2), sensor installation events (Task 3), and community partner events, and community members will to collaboratively determine community needs and next steps for improving air quality and protecting the health of residents (Task 5).

Task 4 describes the multi-modal public awareness and education activities the Leadership Team will use to build community knowledge about the project and the connections between air quality and health. These activities will be designed to effectively and inclusively engage Madison residents in culturally appropriate and relevant ways with multiple techniques required to reach different demographics.

The project will also leverage partnerships internal to the City, including Neighborhood Resource Teams (NRTs), the Latinx Community Engagement Team, and the Community Connections Team for the Racial Equity and Social Justice Initiative to ensure equitable and inclusive community engagement.

EXPERIENCE WORKING TOGETHER

The City and PHMDC have successfully worked with all three community partners to deliver health-focused community education campaigns, programming, and support services. The City, PHMDC, FFBWW, and LHC

partnered to deliver a comprehensive #MaskUp campaign to provide education and masks at the height of the global pandemic. Other successful partnerships between the City, PHMDC, and community partners include: FFBWW's Saving Our Babies Initiative and LHC's partnership in development of the 2019 – 2021 Dane County Community Health Needs Assessment.

PROJECT INFORMATION & DATA AVAILABILITY

The City will create a web page for this initiative on its website where the public can access information about the project and its outputs. This web page will be created early in the project (Task 2) to serve as a primary information source on the project's aims, progress, community engagement and input opportunities, and resulting communication and educational materials. The Story Map (Task 5) showing air quality data from the sensor network and sociodemographic data and explains their significance will be embedded on this page. The web page will be available in English, Spanish, and Hmong.

Air quality data provided by the sensor network will be available in real-time via the existing QuantAQ Cloud. We expect to be reporting PM_1, $PM_{2.5}$, and PM_{10} concentrations as soon as the network is powered. Following the initial commissioning phase, the City of Madison will directly read the sensor data from the QuantAQ server to the project web page where both real-time and recent past measurements (along with historical regional averages) will be displayed for the community.

Section 3 – Environmental Justice and Underserved Communities

The City of Madison is committed to providing a healthy environment for all residents and advancing environmental justice. Building this sensor network in collaboration with community partners and with community engagement will serve as a focal point for raising awareness of residents, with a focus on vulnerable populations, about air quality, environmental justice, and the links between air quality and health.

This project will promote environmental justice in five main ways. First, the project will engage the community through an inclusive process that centers racial equity, as described in Sections 1 and 2. Meaningful involvement of underserved communities ensures that the project's design, outputs, and outcomes support environmental injustice. Second, it provides resources to community partners focusing on health and wellbeing in Madison's BIPOC communities to conduct culturally relevant outreach, engagement, and education within the communities most vulnerable to and impacted by particulate matter pollution. This approach provides information and tools to underserved communities to support their own agency and leadership. Third, this project will provide real-time, publicly accessible measurements of PM pollution, which enables public health agencies and professionals, local government decision-makers, and community organizations to characterize and address disparities in exposure to air pollution and related health outcomes in the Madison community. Fourth, awareness about the connections between air quality and health, combined with access to timely and relevant air quality data, also empowers community members to take actions to reduce their own and their family's exposure at times and places with high PM. Finally, this project sets the stage for collaborative and participatory problem solving, where residents have the education and tools to meaningfully engage in decision making about activities that affect their environment and health with regard to air quality. This is a critical enabling condition for effective, collaborative, and inclusive action to improve health, air quality, and environmental justice.

Section 4 – Environmental Results—Outcomes, Outputs and Performance Measures

A. Expected Project Outputs and Outcomes

Outputs
Task 1. Project Management and Reporting
O1. Completed quarterly reports, including financial reporting
Task 2. Engage Community in Project & Sensor Network Design
O2. Project webpage on the City's website, available in English, Spanish, and Hmong
O3. Summary of the reach and findings from the community outreach and engagement activities carried out in Task 2 to inform Tasks 3 through 6
Task 3. Design and Install Sensor Network

O4. A city-wide network of 70 MODULAIR-PM air quality sensors
O5. Real time air quality data available through QuantAQ Cloud
O6. 3-5 Community-focused sensor installation events, each with 20-30 participants
Task 4. Identify, Map, and Share the Air Quality Story
O7. Air quality data analysis characterize the spatial distribution of PM pollution across the city
O8. Publicly accessible, interactive Story Map
O9. Community partner resources and outreach
Task 5. Collaboratively Identify Needs and Next Steps
O10: 3-5 Open Houses completed, each with 30-40 participants
O11. Summary of the reach and findings from the community outreach and engagement efforts to communicate resource needs and inform next steps
Task 6. Information Transfer and Dissemination
O12. Final project report for the EPA

SHORT-TERM OUTCOMES

1. The city-wide network of MODULAIR-PM sensors provides data about the location, magnitude, and duration of PM pollution at the neighborhood-scale in Madison.
2. Local government, health services, academic institutions, community organizations, and residents are aware of the sensor network and available air quality data, presence of PM pollution in the areas where they live and work, and the connections between air quality and health.
3. Madison residents have equitable access to information and resources to understand the health impacts of PM pollution, when and where they are at risk of exposure to PM pollution, and how they can take action to reduce their exposure to pollution.

INTERMEDIATE OUTCOMES

4. Air quality and environmental justice are factored into City decision-making. The City will use this data to ensure that new and ongoing initiatives advance environmental justice by improving air quality in the neighborhoods most vulnerable to and impacted by particulate matter pollution. For example, this data will help inform where electric buses and other low to no emissions city fleet vehicles should be deployed first, where urban tree canopy and other natural infrastructure can make the biggest impact on air quality improvements, and where air pollution and urban heat island are co-located, which is critical for understanding where impacts are creating multiple hazards for our community and creating win-win strategies for addressing them. The City can also launch new efforts to improve air quality and reduce health disparities in collaboration with community partners.
5. PHMDC and other health agencies and service providers deliver effective and targeted outreach, education, and support to the neighborhoods and populations most impacted and vulnerable to PM and diminished air quality.
6. The City and partners develop and implement strategies to mitigate PM pollution, with a focus on eliminating disparities in exposure to PM pollution.
7. Public health professionals and researchers use the air quality data provided by the sensor network to better characterize the connections between particulate matter concentrations and air quality, health outcomes, and environmental justice in Madison.

LONG-TERM OUTCOMES

8. Particulate matter pollution and inequities in exposure to particulate matter pollution in Madison are reduced through a combination of successful policies, programs, and actions.
9. Health disparities in related to PM pollution are eliminated.

B. Performance Measures and Plan

Project performance will be measured and tracked by the Project Manager, with assistance from the City's Finance Department where applicable. As described in Task 1, the final project work plan will include a timeline for completing all project milestone and outputs. Progress toward meeting these milestones and outputs will be assessed at regular Leadership Team meetings (ca. monthly). Accomplishments, expenditures, and purchases will be summarized in quarterly reports provided to EPA. The Project manager will meet regularly with award sub-recipients to track progress, spending, and address challenges that might arise.

Community engagement will also be tracked throughout the project. Attendance and community input will be recorded at Open Houses (Tasks 2 and 5) and the sensor installation events (Task 3) to help the Leadership Team gauge the success of these outreach strategies, identify geographic or demographic gaps in engagement, and adjust our approach to ensure effective, equitable engagement of Madison's diverse community. Site visits, data downloads, and other performance metrics will be measured for the project website to help us understand reach and engagement with the materials and information provided (Task 4). Community partners will also track the effectiveness of their print, web, audio, video, or event outreach using appropriate methods.

Intermediate and long-term outcomes will be tracked by the City to ensure this project is leveraged for maximum impact on improvements in air quality and community health.

C. Timeline and Milestones

Milestones	Dates
Task 1. Project Management and Reporting	**Months 1 - 34**
M1. Project work plan finalized	Month 1 (Nov '22)
M2. Contracting for sub-recipients	Month 3 (Jan '23)
M3. Quarterly reports completed	Months 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, & 34
Task 2. Engage Community in Project & Sensor Network Design	**Months 4 - 8**
M4. Project webpage on City of Madison website goes live	Month 4 (Feb '23)
M5. Plan, materials, and logistics for Open Houses finalized	Month 4 (Feb '23)
M6. 3-5 Open Houses completed, each with 30-40 participants	Month 8 (June '23)
Task 3. Design and Install Sensor Network	**Months 9 - 13**
M7. Air quality sensor network design completed	Month 9 (July '23)
M8. Contracting for data management and analysis completed	Month 9 (July '23)
M9. Air quality sensors procured	Month 10 (Aug '23)
M10. All air quality sensors installed and connected to the cloud	Month 13 (Nov '23)
M11. 3-5 Community-focused sensor installation events completed	Month 13 (Nov '23)
4. Identify, Map, and Share the Air Quality Story	**Months 14 - 28**
M9. Three months of air quality data available	Month 16 (Feb '24)
M10. Data analysis completed	Month 20 (June '24)
M11. Story Map made available on the project webpage	Month 24 (Oct '24)
M12. Community Partner resources and outreach deployed	Month 28 (Feb '25)
5. Collaboratively Identify Needs and Next Steps	**Months 28 – 34**
M13. Plan, materials, and logistics for Open Houses finalized	Month 28 (Feb '25)
M14. 3-5 Open Houses completed, each with 30-40 participants	Month 34 (Aug '25)
6. Information Transfer and Dissemination	**Months 35-36**
M15. Present at professional and scientific meetings	Throughout project
M16. Final report complete	Month 36 (Oct '25)

Section 5 – Quality Assurance Statement

Please see the attached Quality Assurance Statement.

Section 6 – Programmatic Capability and Past Performance

A. Past Performance

The City typically receives and manages $50-75 million in federal and state grant awards annually and has never defaulted on the terms of these awards. All awards are monitored by a Finance Department Budget Analyst, and an experienced Project Manager. Below are the recently completed federally funded assistance agreements that the City performed in the last three years. The City successfully completed and managed these agreements.

1. CDFA 66.808 - SOLID WASTE MANAGEMENT ASSISTANCE GRANTS. Agency: Environmental Protection Agency. Award ID: 83967101. Award Amount: $39,000. Project Period: 7/1/2019 – 2/28/2022.
2. CFDA 16.034 - CORONAVIRUS EMERGENCY SUPPLEMENTAL FUNDING PROGRAM. Agency: Department

of Justice. Award ID: 2020VDBX0082. Award Amount: $279,128. Project Period: 1/20/2020 - 1/31/2022.

3. CFDA 20.513 - ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES. Agency: Department of Transportation. Award ID: WI-2020-025. Award Amount: $351,964. Project Period: 5/18/2020 - 1/18/2022.
4. CDFA 14.248 - COMMUNITY DEVELOPMENT BLOCK GRANTS SECTION 108 LOAN GUARANTEES. Agency: Department of Housing and Urban Development. Award ID: WI0232L5I031900. Award Amount: $107,086 Project Period: 1/1/2021 - 12/31/2021.
5. CDFA 20.526 - BUSES AND BUS FACILITIES FORMULA, COMPETITIVE, AND LOW OR NO EMISSIONS PROGRAMS. Agency: Department of Transportation. Award ID: WI-2018-012. Award Amount: $1,278,950. Project Period: 7/10/2018 - 1/8/2021.

B. Reporting Requirements

Under each of these agreements listed above, the City met all reporting requirements. We submitted progress and final reports specified in each agreement on time and provided sufficient details on project activities and progress towards achieving the expected outputs and outcomes of the agreements. We submitted acceptable final technical reports under each agreement.

C. Staff Expertise

Dr. Jessica Price, the Sustainability and Resilience Manager for the City of Madison, will serve as Project Manager for this work. Jessica brings expertise in natural and social sciences, policy, and community engagement. She has extensive experience leading collaborative efforts to develop innovative, science-based, and equitable solutions to advance climate resilience, sustainability, and environmental justice. Prior to joining the Mayor's Office, Jessica served as Renewable Energy Strategy Lead for the Nature Conservancy in New York. Jessica has a PhD in Landscape Ecology and an MS in Conservation Biology from the University of Wisconsin-Madison, where she was a National Science Foundation Integrative Graduate Education and Research Fellow and a Doris Duke Conservation Fellow. Positioned in the Mayor's Office, Jessica has the full support and resources from City of Madison staff and leadership to successfully achieve the goals of this project. Resumes of key personnel partner organizations are listed in Section 8 and uploaded as Optional Attachments.

Section 7 – Budget

A & B. Budget Detail and Reasonableness of Costs

PERSONNEL

- City of Madison Sustainability and Resilience Manager will serve as Project Manager. Annual Salary ($104,659) x 15% FTE effort for 3 years = $47,097. Full time employees at City of Madison work 2015 hrs/yr.

FRINGE BENEFITS

- City of Madison Sustainability and Resilience Manager = $10,630. Fringe benefits will be provided at a rate of 22.57% of salary according to City of Madison policy. Fringe benefits include the cost of leave, employee insurance, pensions and unemployment benefit plans.

TRAVEL – There are no travel costs for this project.

EQUIPMENT – There is are no equipment costs for this project.

SUPPLIES

- 70 MODULAIR-PM air quality sensor units[12] x $1295 per unit = $90,650
- 70 Solar + Battery kit[13] to power MODULAIR-PM air quality sensor units x $495 per kit = $34,650
- Supplies for attaching sensors to fixtures. $20 per fixture x 70 sensors = $1400

CONTRACTUAL

- QuantQA Cloud Service to provide data management and analytics at $20,400 per year x 2 years = $40,800. Quant QA Cloud Service is a cost effective tool for MODULAIR-PM sensor network operation, data management, analytics, and data sharing. The City of Madison does not already have the capacity to perform these functions with our own IT system.
- Hmong and Spanish Translation Services = $10,000. The project web page, Story Map, and other written materials will be made available in English, Spanish, and Hmong. This estimate assumes translation of 100,000

words (~20 pages) at a cost of ten cents per word.

OTHER

- Printing Costs = $2,500. Printed materials will be circulated at the project's Open Houses and in the community to facilitate knowledge transfer and to assist with outreach efforts.
- Subaward to University of Wisconsin-Madison = $37,019. We will partner with UW-Madison for design of the PM sensor network, data QA/QC, and guidance on air quality data interpretation and communication. The subaward will support a graduate research assistant salary and fringe benefits for 6 months ($16,874) and one semester tuition ($6,000). Additional costs include $2,720 in supplies and $10,875 in overhead costs (at a rate of 55% of modified total direct costs per UW-Madison's 2021 F&A Agreement with the Department of Health and Human Services.
- Subaward to Foundation for Black Women's Wellness = $50,000. We will partner with the FFBWW for effective engagement with Madison's black community. They will serve on the projects Leadership team and provide culturally congruent outreach, education and programming, leveraging their Morning Coffee Virtual programming, robust communication channels, and Leadership and Community Health Worker team. Funds will be used to support marketing, communications, and education; as well as staff salary and benefits committed to co-leading and informing the project, and program design and implementation.
- Subaward to Latino Health Council = $50,000. We will partner with LHC for effective engagement with Madison's Latinx community. LHC will serve on the project's Leadership Team and use their communication channels, activities, and events to engage the Latinx community, including the Nuestra Salud (Our Health) radio program, their Facebook page, distributing materials at Latinx owned businesses and at in-person LHC events, and present information and soliciting feedback at LHC meetings. Funds will support LHC staff salary and fringe ($35,000) and outreach activities ($15,000).
- Subaward to the Hmong Institute = $50,000. We will partner with the Hmong Institute for effective engagement with Madison's Hmong and Southeast Asian communities. Funds will support the Hmong Institute's staff time and fringe benefits - $19,500 for executive staff and $30,500 for a part-time limited term staff dedicated to this project. They will serve on the project's Leadership Team, develop program materials, conduct in-person meetings with Hmong community and agency leaders, lead community focus groups, conduct community surveys and submit report and program updates, among other activities.

INDIRECT CHARGES - No indirect costs are included in this proposal.

LEVERAGING – While no voluntary match is included, this project leverages the capacity and resources of both the City of Madison and Public Health Madison and Dane County. Technical support and guidance by UW-Madison is supported by discretionary funds of Prof. Holloway and Prof. Bertram.

BUDGET SUMMARY

Line Item & Itemized Cost	**EPA Funding**
Personnel	
Project Manager (City of Madison) @ $51.94/hr x 5.8125hrs/wk x 156 wks	$47,097
TOTAL PERSONNEL	$47,097
Fringe Benefits	
Project Manager (City of Madison) @ 22.75% of salary	$10,630
TOTAL FRINGE BENEFITS	$10,630
Travel	
TOTAL TRAVEL	$0
Equipment	
TOTAL EQUIPMENT	$0
Supplies	
70 MODULAIR-PM air quality sensor units	$90,650
70 Solar + Battery Kits	$34,650
Supplies for attaching 70 sensors to fixtures	$1400
TOTAL SUPPLIES	$126,700
Contractual	
2-year QuantAQ Cloud Service Contract	$40,800

Hmong and Spanish Translation Services	$10,000
TOTAL CONTRACTUAL	$50,800
Other	
Printing	$2,500
UW-Madison	$37,019
FFBWW	$50,000
Latino Health Council	$50,000
The Hmong Institute	$50,000
Community Meeting Logistics	$5,000
TOTAL OTHER	$194,519
Indirect Charges	
TOTAL INDIRECT	$0
TOTAL FUNDING	**$429,746**
TOTAL PROJECT COST	**$429,746**

C. Expenditure of Awarded Funds

In 2020, the City of Madison received and managed more than $70 million in federal and state grant awards and has never defaulted on the terms of these awards. Outside appropriations must be approved by a supermajority of the Common Council relying upon a resolution describing the purpose, amounts, and agency assigned to the project. The City's Sustainability and Resilience Manager will serve as Project Manager for this award. The award will be monitored by a Finance Department Budget Analyst.

In accordance with State law, the City prepares and publishes financial statements presenting the financial position and operating results at the close of each fiscal year. The statements must conform to GAAP as promulgated by GASB. Furthermore, an independent firm of licensed, certified public accounts annually audits both the City financial statements and performs an audit, the Single Audit, of state and federal grants. The City of Madison has the highest rating possible on its general obligation debt, Aaa from Moody's Investor Service. This rating reflects the City's strong financial management.

Section 8 – Optional Attachments

See the attached Quality Assurance Statement (1), partnership letters (6), and resumes of key personnel (7).

REFERENCES

[1] Peng, R.D., et al. (2008), Coarse particulate matter air pollution and hospital admissions for cardiovascular and respiratory diseases among medicare patients, J Am Med Assoc, 299(18), 2172-2179.

[2] Pope, C.A., et al. (2002), Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution, J Am Med Assoc, 287(9), 1132-1141.

[3] Pirjola, L., et al. (2012), Spatial and temporal characterization of traffic emissions in urban microenvironments with a mobile laboratory, Atmospheric Environment, 156-167. Vol. 63.

[4] Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index 2018 Database Wisconsin.

[5] Wisconsin Department of Natural Resources. 2022 Air Monitoring Network Plan. Available at: https://dnr.wisconsin.gov/sites/default/files/topic/AirQuality/2022AnnualNetworkPlan0629.pdf

[6] Wisconsin Department of Health Services, et al. Asthma in Wisconsin 2020. Available at: https://www.dhs.wisconsin.gov/publications/p02412-20.pdf

[7] Wisconsin Department of Health Services. Health Disparities in Wisconsin Hospitalizations for Asthma. 2019. Available at: https://www.dhs.wisconsin.gov/publications/p01727.pdf

[8] Wisconsin Department of Health Services, et al. Wisconsin Asthma Plan 2021-2025. Available at: https://www.chawisconsin.org/?wpdmdl=1821&ind=1604686177411

[9] Public Health Madison and Dane County. Healthy Dane Community Health Dashboards. Available at: http://healthydane.org/?hcn=CommunityDashboard

[10] Public Health Madison and Dane County. COVID-19 Dashboard. Available at: https://publichealthmdc.com/coronavirus/dashboard

[11] City of Madison Racial Equity and Social Justice Initiative. Public Participation Resource Guide, November 2020. Available at: https://www.cityofmadison.com/civil-rights/documents/EngagementGuide_web.pdf

[12] QuantAQ's MODULAIR-PM Product Specification Sheet is available at: https://docs.quant-aq.com/modulair-pm-datasheet

[13] QuantAQ's Solar + Battery Kit Product Specification Sheet is available at: https://docs.quant-aq.com/solar-battery-installation

Jeffery S. Lafferty

Ex. 6 Personal Privacy (PP)

Public Health Madison & Dane County (PHMDC)
210 Martin Luther King Blvd, Rm 507, Madison, WI 53703

Professional Experience:

2008 – Present ***Environmental Epidemiologist***
Department of Environmental Health
Public Health Madison and Dane County Madison, WI

- Communication of health risk information to the general public, Board of Health, city and county agencies and councils, local coalitions, and policy makers.
- Performance of risk assessments and the provision of recommendations for action on environmental issues including (but not limited to) air and drinking water quality, radon, pesticides, toxic substance spills and exposures to environmental contaminants.
- Member of various topic specialist teams including childhood lead program, climate change, water quality, and sustainability.
- Member of the Health and Racial Equity team for Public Health Madison and Dane County.
- Data analysis, tracking and reporting of Dane County mosquito activity and treatment, childhood lead poisoning, alcohol and tobacco use, and local air and water quality.
- Investigation of individual disease clusters and/or suspected environmental health concerns, and development and/or revision (as necessary) of PHMDC publications focused on environmental health.
- Serve as steering committee member for the triennial Dane County Youth Assessment and provide assistance with data analysis and interpretation of data
- Serve as a key public health contact to county and state agencies and the general public.

2007 – 2008 ***Program Manager***
Paul P. Carbone Comprehensive Cancer Center
University of Wisconsin – Madison

- Supervision of laboratory research and assistance in conducting research projects to provide instrumentation and expertise for the development of assays, sample collection, and result analysis for clinical and pre-clinical trials of new anticancer agents and chemoprevention.
- The design, maintenance, and assist in the conductance of xenograft investigations of experimental anticancer agents.
- Dose preparation & dosing of animals
- Rodent surgery and necropsy
- The development, monitoring, and assessment of GLP (Good Laboratory Practice) operating procedures for sample analysis.
- Management of the daily operation of the laboratory under direction of laboratory director and aid in the hiring, training, and evaluation of research staff.

2006 – 2007 ***Research Specialist***
Department of Surgery, Division of Otolaryngology
University of Wisconsin – Madison

- Conducting research projects with the primary focus on aging of cranial muscle.
- Preparation of muscle samples for SDS-PAGE analysis and running of the SDS-PAGE electrophoresis experiments, performance of surgical procedures and behavioral testing on rodents, preparation and conduction of triple staining immunohistochemical staining for the analysis of neuromuscular junctions, and confocal microscopy.
- Direction, monitoring, and/or participation in research activities such as data collection, evaluation, analysis of data gathered from experimental procedure, and training of students for research support.

2002 – 2006 ***Assistant Toxicologist***
Covance Laboratories, Inc.
3301 Kinsman Blvd. Madison, WI 53704

- Administrative and scientific support to the study directors.
- Wrote protocols and amendments and ensured compliance with appropriate SOPs, GLPs, and regulatory agency guidelines.
- Initiated costing, scheduled studies, monitored the in-life portions of the studies, and prepared the computer system for collection of telemetry data.
- Assisted study directors with proposal management and provided technical/scientific guidance and leadership to ensure accurate project completion.
- Met with clients to discuss study progress, preparation of study data presentations, and participated and/or initiated and led study meetings.
- Prepared progress reports, wrote report procedures, wrote and/or reviewed results and conclusions sections in the final reports.

2000 – 2002 ***Research Assistant***
Division of Toxicology, Department of Pharmacology and Toxicology
Indiana University School of Medicine Indianapolis, IN 46202

- Responsible for and/or participated in *in vivo* and *in vitro* studies examining potential mechanisms of chemical carcinogens; responsibilities included study design, dose preparation and delivery to animal, rodent surgery and necropsy, histopathology, data analysis, and reporting.
- Created written reports and data presentations for internal and peer reviewed research forums and trained new students and personnel in laboratory techniques, procedures, and equipment.

Education:

2013 PhD in Public Health – Epidemiology
School of Health Sciences
Walden University

2009 Master of Science in Public Health (MSPH)
School of Health Sciences
Walden University

2002 Master of Science in Toxicology (MS)
Department of Pharmacology & Toxicology
Indiana University School of Medicine

2000 Bachelor of Arts in Biology (w/ High Distinction)
School of Natural Sciences
Department of Biology
Indiana University

Selected Publications:

Wilson, E., **Lafferty, J.S.**, Thiboldeaux, R., Tomasallo, C., Grajewski, B., Wozniak, R., Meiman, J. (2018). Occupational mercury exposure at a fluorescent lamp recycling facility – Wisconsin, 2017. *Morbidity and Mortality Weekly Report (MMWR)*, 67(27), 763 – 766.

Dobbe, E., Gurney, K., Kiekow, S., **Lafferty, J.S.**, Kolesar, J. (2008). Gene-expression assays: New tools to individualize treatment of early-stage breast cancer. *American Journal of Health-System Pharmacy*, 65(1), 23-28.

Lafferty, J.S., Caya, N., Bultman, J., Herman, J.K., Sarazan, R.D. (2006). Cardiovascular and respiratory validation study in telemeterized Cynomolgus monkeys and Beagle dogs. *The Toxicologist*, 90(1-S), 134.

PENG HER

Ex. 6 Personal Privacy (PP)

PROFESSIONAL PROFILE

- Over 20 years of proven organizational experience in strategic planning, developing, and maintaining working relationship with other senior leaders within an organization, municipalities, elected officials, governmental entities, funders, and diverse stake holders as a successful bridge builder able to bring opposing views together to develop innovative solutions.

- Proven leadership with over 17 years of experience representing organizations, being a spokesperson for the community, and maintaining strong relationships with government leaders, local community and non-profit organizations, and business leaders.

EDUCATIONAL EXPERIENCE

Master of Science in Physics, DePaul University, Chicago, IL
Bachelor of Arts in Physics, Central College, Pella, IA
Trinity College, Carmarthen, Wales, *Central College's Study Abroad Program*

PROFESSIONAL EXPERIENCE

The Hmong Institute, Madison, WI **2018-Present**

CEO
Co-founder of nonprofit whose mission is empowering community through education, health, and preservation of Hmong heritage. We provide culturally and linguistically competent mental health services to Southeast and Central Asian community members. Established the Hmong Language and Culture Enrichment Program: a six-week full day, full immersion program for students to enhance their academic skills, prepare them for college and their career through learning about the Hmong history, language and culture. Provide culturally responsive training through our Hmong health summit, Hmong American Community Certificate program, and our mental health series. Community development working with community leaders to identify needs and create innovative solutions.

UW-Madison Institute for Research on Poverty, Madison, WI **2018-2021**

Community Relations Coordinator
Community outreach for UW's DreamUp WI, a community-university collaboration to increase shared prosperity. Funded by Schmidt Futures, a venture facility for public benefit that works to advance society through technology, inspire breakthroughs in scientific knowledge, and promote shared prosperity. The University of Wisconsin-Madison (UW) is one of four public universities chosen by Schmidt Futures to partner in this work, which will be led by the UW Institute for Research on Poverty. Leveraged over $8 million dollars to increase the net income for households in Dane County.

Center for Resilient Cities, Madison, WI **2014-2018**

Associate Director
Oversaw the day-to-day administration of the Badger Rock Center facilities designed and built to LEED Platinum standards that houses Badger Rock Neighborhood Center with a commercial-grade kitchen, a public charter middle school (Badger Rock Middle School), and an urban agriculture operation (Community Groundworks). The Badger Rock Center integrates urban design, community food security, education, environmental sustainability, and public health, all of which are fundamental to the cultivation of resilient individuals, families, and communities that thrive.

Urban League of Greater Madison, Madison, WI **2012-2014**

Vice President of Promise Zone and Partnerships
Leadership and supervision of the South Madison Promise Zone and partnerships for the Urban League. Member of the executive team responsible for strategic planning, identification and management of key metrics and indicators of success, human resource management, professional development, fundraising and volunteer/partnership recruitment. Cultivated and maintain strategic partnerships with funders, elected officials, business leaders, and partners to advance the mission of the Urban League. Managed and coordinated initiatives that partners with residents and community stake holders to design a holistic place-based, cradle to career system of education, human service, health and wellness, and employment services.

SELECTED AWARDS AND AFFILIATIONS

- **Governor Tony Evers' Early Childhood Advisory Council:** Member, 2019- present
  Develop recommendations to ensure that all children and families in Wisconsin have access to high quality early childhood educational programs and services.
- **Racial Equity Working Group on Housing:** Member, 2021- present
  Working group dedicated to exploring opportunities to promote racial equity in homelessness system by studying and reviewing policy and make recommendation to the State of Wisconsin Interagency Council on Homelessness.
- **Governor Tony Evers' What's Best for Kids Advisor Council:** Members, Nov 2018
  Advise members of Governor-elect Evers' transition team on policy matters relating to the Department of Children and Families, the Department of Public Instruction, the Department of Health Services, and numerous other state boards and policy initiatives focused on children and families.
- **Dane County and City of Madison Rev. Dr. MLK Humanitarian Award:** *2015*
  Recipient of the Rev. Dr. Martin Luther King Humanitarian Award
- **UW-Madison Chancellor's Community Advisory Council**: *Member, 2017-present*
  Work with the Chancellor on building reciprocal relationships between the campus and community.
- **Board of Visitor for the Morgridge Center**: *Board member, 2013-present*
  Advise and work with the Center on how to better engage community-based partners so faculty, staff, and students may work with community partners to solve community challenges through service learning.
- **Access Community Health Centers:** *Board member, 2017-present*
  Work with board and staff to better serve the Dane county area's health care needs.
- **Hmong Lao Overseas Committee:** Member, 2011 – Present
  First Hmong American delegation working with the US State Department to officially visit Laos to establish humanitarian dialogue between the two countries. The delegation met with the President of the National Assembly, Cabinet members, and Minister of numerous Ministries. As a result, Secretary of State Hillary Clinton visited Laos in 2012, the first Secretary to visit Laos in 57 years. President Obama visited Laos in 2016, the first President to ever visit Laos.
- **Hmong Cultural Center of Wisconsin:** Board President, 2008 – 2012
  State-wide effort to obtain $2.25 million from the State of Wisconsin to build the Hmong Cultural Center of Wisconsin in Dane County.
- **Hmong Wisconsin Chamber of Commerce:** Founding Board of Directors, 2003 – 2016
  Help establish a $200,000 Revolving Loan Fund. Advocate for small minority business owners with State government and provide technical support such as writing business plans, creating finance statements, and creating budgets to minority business owners.

PENG HER

Ex. 6 Personal Privacy (PP)

PROFESSIONAL PROFILE

- Over 20 years of proven organizational experience in strategic planning, developing, and maintaining working relationship with other senior leaders within an organization, municipalities, elected officials, governmental entities, funders, and diverse stake holders as a successful bridge builder able to bring opposing views together to develop innovative solutions.

- Proven leadership with over 17 years of experience representing organizations, being a spokesperson for the community, and maintaining strong relationships with government leaders, local community and non-profit organizations, and business leaders.

- Results-oriented administrator with over 17 years of experience with an excellent track record of senior leadership, working in high profile position, overseeing day-to-day administrative functions, with research experience to create outcomes and influence policy, and excellent written, verbal and interpersonal communication skills.

EDUCATIONAL EXPERIENCE

Master of Science in Physics, DePaul University, Chicago, IL
Bachelor of Arts in Physics, Central College, Pella, IA
Trinity College, Carmarthen, Wales, *Central College's Study Abroad Program*

PROFESSIONAL EXPERIENCE

The Hmong Institute, Madison, WI **2018-Present**

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UW-Madison Institute for Research on Poverty, Madison, WI **2018-2021**

Community Relations Coordinator
Community outreach for UW's DreamUp WI, a community-university collaboration to increase shared prosperity. Funded by Schmidt Futures, a venture facility for public benefit that works to advance society through technology, inspire breakthroughs in scientific knowledge, and promote shared prosperity. The University of Wisconsin-Madison (UW) is one of four public universities chosen by Schmidt Futures to partner in this work, which will be led by the UW Institute for Research on Poverty. Leveraged over $8 million dollars to increase the net income for households in Dane County.

Center for Resilient Cities, Madison, WI **2014-2018**

Associate Director
Oversaw the day-to-day administration of the Badger Rock Center facilities designed and built to LEED Platinum standards that houses Badger Rock Neighborhood Center with a commercial-grade kitchen, a public charter middle school (Badger Rock Middle School), and an urban agriculture operation (Community Groundworks). The Badger Rock Center integrates urban design, community food security, education, environmental sustainability, and public health, all of which are fundamental to the cultivation of resilient individuals, families, and communities that thrive.

Urban League of Greater Madison, Madison, WI **2012-2014**

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Leadership and supervision of the South Madison Promise Zone and partnerships for the Urban League. Member of the executive team responsible for strategic planning, identification and management of key metrics and indicators of success, human resource management, professional development, fundraising and volunteer/partnership recruitment. Cultivated and maintain strategic partnerships with funders, elected officials, business leaders, and partners to advance the mission of the Urban League. Managed and coordinated initiatives that partners with residents and community stake holders to design a holistic place-based, cradle to career system of education, human service, health and wellness, and employment services.

AWARDS/PROFESSIONAL AFFILIATIONS

- **Governor Tony Evers' Early Childhood Advisory Council:** Member, 2019- present
  Develop recommendations to ensure that all children and families in Wisconsin have access to high quality early childhood educational programs and services.
- **Racial Equity Working Group on Housing:** Member, 2021- present
  Working group dedicated to exploring opportunities to promote racial equity in homelessness system by studying and reviewing policy and make recommendation to the State of Wisconsin Interagency Council on Homelessness.
- **Governor Tony Evers' What's Best for Kids Advisor Council:** Members, Nov 2018
  Advise members of Governor-elect Evers' transition team on policy matters relating to the Department of Children and Families, the Department of Public Instruction, the Department of Health Services, and numerous other state boards and policy initiatives focused on children and families.
- **Dane County and City of Madison Rev. Dr. MLK Humanitarian Award:** *2015*
  Recipient of the Rev. Dr. Martin Luther King Humanitarian Award
- **UW-Madison Chancellor's Community Advisory Council**: *Member, 2017-present*
  Work with the Chancellor on building reciprocal relationships between the campus and community.
- **Board of Visitor for the Morgridge Center**: *Board member, 2013-present*
  Advise and work with the Center on how to better engage community-based partners so faculty, staff, and students may work with community partners to solve community challenges through service learning.
- **Access Community Health Centers:** *Board member, 2017-present*
  Work with board and staff to better serve the Dane county area's health care needs.
- **Badger Rock Middle School Governance Council:** *Chair, 2015-2019*
  Middle school that empowers its students to thrive as citizens, entrepreneurs, leaders, collaborators, and innovators, working to restore the natural world and better the cultural environment while creating just, nourishing, and sustainable communities.

- **Madison Police Department:** *Hmong Cultural Competency Trainer, 2015-present*
  Hmong cultural competency and diversity trainer to new police recruits.
- **United Way Schools of Hope:** *Member, 2014-2017*
  Work with Superintendent and United Way of Dane county to evaluate and support Schools of Hope in the Metropolitan School District.
- **MMSD Superintendent's Human Resource Advisory Council:** *Member, 2014-present*
  Advise and work with Superintendent on innovative ways to support students of color and how to better engage community-based partners.
- **Law Enforcement and Communities of Color Collaborative:** *Member, 2014-2020*
  Work with law enforcement on how to build trust and respect with community of color, reduce tensions, and how to better engage community-based partners.
- **Hmong Education Council:** *Co-Chair, 2012-present*
  Provide advocacy for needs of Hmong students, parents, and community, host workshops to provide technical support to Hmong parents, and a resource to the larger community.
- **City of Madison Economic Development Commission:** *Board member, 2007 – 2014*
  Work with the Mayor, Common Council, Commissions, and city staff to facilitate the development of a healthy and diversified economy in which businesses can locate, innovate, grow, and prosper.
- **Hmong Lao Overseas Committee:** *Member, 2011 – Present*
  First Hmong American delegation working with the US State Department to officially visit Laos to establish humanitarian dialogue between the two countries. The delegation met with the President of the National Assembly, Cabinet members, and Minister of numerous Ministries. As a result, Secretary of State Hillary Clinton visited Laos in 2012, the first Secretary to visit Laos in 57 years. President Obama visited Laos in 2016, the first President to ever visit Laos.
- **Communities United of Dane County:** *Chair, 2008 – 2010*
  Work with community leaders to monitor incidences of discrimination, make recommendations to City and County governmental agencies on cultural diversity issues affecting communities of color, and advocate for social justice.
- **Hmong Cultural Center of Wisconsin:** *Board President, 2008 – 2012*
  State-wide effort to obtain $2.25 million from the State of Wisconsin to build the Hmong Cultural Center of Wisconsin in Dane County.
- **Dane County Human Services Board:** *Board member, 2005 – 2009*
  Identified and analyzed human services needs to make recommendations to County Executive and County Board of Supervisors to successfully address the needs of the community.
- **Wisconsin Organization for Asian Americans:** *Executive Committee Member, 2000 - 2012*
  Promote, advocate, and advise on diversity and culturally competent services for Asian Americans by providing cultural training and make recommendation to city and state agencies.
- **Hmong Wisconsin Chamber of Commerce:** *Founding Board of Directors, 2003 – 2016*
  Help establish a $200,000 Revolving Loan Fund. Advocate for small minority business owners with State government and provide technical support such as writing business plans, creating finance statements, and creating budgets to minority business owners.

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Bertram, Timothy

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	END DATE MM/YYYY	FIELD OF STUDY
Colby College, Waterville, ME	BA	05/2000	Chemistry
University of California, Berkeley, Berkeley, CA	PHD	12/2006	Chemistry
University of Washington, Seattle, Seattle, WA	Postdoctoral Fellow	07/2009	NOAA G&GC Fellow

A. Personal Statement

Our research team has extensive experience in outdoor and indoor air quality. We have developed both compact, autonomous instruments for the characterization the spatial and temporal variability in air quality and high precision instrumentation for detailed analyses. In the context of this project, our group has worked with industrial partners on characterizing the spatial and temporal variability in indoor and outdoor airquality.

Relevant Support:

Johnson Controls Inc. (Industry Contract) $600,000 2021-2024 “Healthy Buildings (baselining and products/services that provide quantitative improvement to health and productivity)”

Department of Energy $800,000 2021-2024 “Observation-Based Constraints on the Condensational Growth of Marine Aerosol Particles to Cloud Condensation Nuclei in the Eastern North Atlantic.”

Environmental Protection Agency $798,234 2020-2023 “The development, validation and integration of a new model-ready parameterization of N2O5 heterogeneous chemistry.”

Most Relevant Publication:

1. Rothamer D, Sanders S, Reindl D, Bertram T. Strategies to minimize SARS-CoV-2 transmission in classroom settings: combined impacts of ventilation and mask effective filtration efficiency. Science and Technology for the Built Environment. 2021 July 21; 27(9):1181-1203. Available from: https://www.tandfonline.com/doi/full/10.1080/23744731.2021.1944665 DOI: 10.1080/23744731.2021.1944665

B. Positions, Scientific Appointments and Honors

Positions and Scientific Appointments

2019 -	Professor, University of Wisconsin, Madison, Department of Chemistry, Madison, WI
2015 -	Affiliate Professor, University of Wisconsin, Madison, Departments of Civil and Environmental Engineering and Atmospheric and Oceanic Sciences , Madison, WI
2015 - 2019	Assistant - Associate Professor, University of Wisconsin, Madison, Department of Chemistry, Madison, WI
2009 - 2014	Assistant Professor, University of California, San Diego, Department of Chemistry and Biochemistry, La Jolla, CA

Honors

2014	Masao Horiba Award, Horiba
2012	NSF CAREER Award, NSF
2012	NASA New Investigator Award, NASA
2011	DOE Early Career Award, DOE

C. Contribution to Science

1. Recent publications related to the work proposed here.

   a. Rothamer D, Sanders S, Reindl D, Bertram T. Strategies to minimize SARS-CoV-2 transmission in classroom settings: combined impacts of ventilation and mask effective filtration efficiency. Science and Technology for the Built Environment. 2021 July 21; 27(9):1181-1203. Available from: https://www.tandfonline.com/doi/full/10.1080/23744731.2021.1944665 DOI: 10.1080/23744731.2021.1944665

   b. Le H, Novak G, Janek K, Wang J, Huynh K, Myer C, Weinstein A, Oberstar E, Rasmussen J, Bertram T. A novel box for aerosol and droplet guarding and evacuation in respiratory infection (BADGER) for COVID-19 and future outbreaks. Scientific Reports. 2021 February 04; 11(1):-. Available from: http://www.nature.com/articles/s41598-021-82675-6 DOI: 10.1038/s41598-021-82675-6

2. Recent, representative publications that highlight our groups general interests in indoor and outdoor air chemistry.

   A (near) complete list of publications can be found here: https://orcid.org/0000-0002-3026-7588

   a. Novak G, Fite C, Holmes C, Veres P, Neuman J, Faloona I, Thornton J, Wolfe G, Vermeuel M, Jernigan C, Peischl J, Ryerson T, Thompson C, Bourgeois I, Warneke C, Gkatzelis G, Coggon M, Sekimoto K, Bui T, Dean-Day J, Diskin G, DiGangi J, Nowak J, Moore R, Wiggins E, Winstead E, Robinson C, Thornhill K, Sanchez K, Hall S, Ullmann K, Dollner M, Weinzierl B, Blake D, Bertram T. Rapid cloud removal of dimethyl sulfide oxidation products limits SO_2 and cloud condensation nuclei production in the marine atmosphere. Proceedings of the National Academy of Sciences. 2021 October 11; 118(42):e2110472118-. Available from: http://www.pnas.org/lookup/doi/10.1073/pnas.2110472118 DOI: 10.1073/pnas.2110472118

   b. Novak G, Bertram T. Reactive VOC Production from Photochemical and Heterogeneous Reactions Occurring at the Air–Ocean Interface. Accounts of Chemical Research. 2020 May 05; 53(5):1014-1023. Available from: https://pubs.acs.org/doi/10.1021/acs.accounts.0c00095 DOI: 10.1021/acs.accounts.0c00095

   c. Veres P, Neuman J, Bertram T, Assaf E, Wolfe G, Williamson C, Weinzierl B, Tilmes S, Thompson C, Thames A, Schroder J, Saiz-Lopez A, Rollins A, Roberts J, Price D, Peischl J, Nault B, Møller K, Miller D, Meinardi S, Li Q, Lamarque J, Kupc A, Kjaergaard H, Kinnison D, Jimenez J, Jernigan C, Hornbrook R, Hills A, Dollner M, Day D, Cuevas C, Campuzano-Jost P, Burkholder J, Bui T, Brune W, Brown S, Brock C, Bourgeois I, Blake D, Apel E, Ryerson T. Global airborne sampling reveals a previously unobserved dimethyl sulfide oxidation mechanism in the marine atmosphere. Proceedings of the National Academy of Sciences. 2020 March 03; 117(9):4505-4510. Available from: http://www.pnas.org/lookup/doi/10.1073/pnas.1919344117 DOI: 10.1073/pnas.1919344117

   d. Vermeuel M, Novak G, Alwe H, Hughes D, Kaleel R, Dickens A, Kenski D, Czarnetzki A, Stone E, Stanier C, Pierce R, Millet D, Bertram T. Sensitivity of Ozone Production to NO_x and VOC Along the Lake Michigan Coastline. Journal of Geophysical Research: Atmospheres. 2019 October 30; 124(20):10989-11006. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1029/2019JD030842 DOI: 10.1029/2019JD030842

TRACEY HOLLOWAY

Ex. 6 Personal Privacy (PP)

Nelson Institute Center for Sustainability and the Global Environment (SAGE)
University of Wisconsin—Madison, Madison, WI 53726

Tracey Holloway leads an air quality research program at the University of Wisconsin—Madison, jointly appointed in the Nelson Institute and the College of Letters & Sciences. ***Recognized for excellence*** *with the 2020 Ascent Award for mid-career scientists from the American Geophysical Union Atmospheric Sciences Section •* ***Leader of national air quality team for NASA*** *from 2016-2020 and 2021-2025; •* ***Award-winning leader in science outreach, diversity, and mentoring****, including the 2022 Slesinger Award in faculty mentoring.*

PROFESSIONAL EXPERIENCE

University of Wisconsin – Madison

- 2016-Present: Professor, Nelson Institute for Environmental Studies and Atmospheric & Oceanic Sciences
- 2014-2016: Professor, Nelson Institute for Environmental Studies
- 2009-2014: Associate Professor, Nelson Institute for Environmental Studies
- 2003-2009: Assistant Professor, Nelson Institute for Environmental Studie

Select other positions

- 2016-Present: Leader, NASA Health and Air Quality Applied Sciences Team (HAQAST-2 and -3)
- 2017-Present: Advisory Committee Member, Yale/JHU SEARCH ($10M EPA ACE Research Center)
- 2013-Present: Member, Wisconsin Department of Natural Resources Air Management Study Group
- 2014-2018: Officer (President '14-'17; Treasurer '17-18), Earth Science Women's Network Non-Profit (ESWN, Inc.)
- 2012-2016: Deputy Leader, NASA Air Quality Applied Sciences Team (HAQAST-1)
- 2008-2011: Director, Nelson Institute Center for Sustainability and the Global Environment (SAGE)
- 2001-2003: Post-Doctoral Fellow, Earth Institute, Columbia University

EDUCATION

- **Princeton University**, Princeton, NJ (1995-2001)
  Ph.D., Atmospheric and Oceanic Sciences Program
  Graduate Certificate in Science, Technology, and Environmental Policy,
  Woodrow Wilson School of Public and International Affairs
- **Brown University**, Providence, RI (1991-1995)
  Sc.B. with Honors in Applied Mathematics

MAJOR AWARDS

- Slesinger Award for Excellence in Mentoring, UW-Madison Women Faculty Mentoring Program (2021)
- Gaylord Nelson Distinguished Professor (2017-2021)
- American Geophysical Union Ascent Award in the Atmospheric Sciences (2020)
- Phi Beta Kappa Excellence in Teaching Award, University of Wisconsin—Madison (2019)
- Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring to the Earth Science Women's Network (PAESMEM, 2018); Holloway co-founded ESWN in 2002 and served as its first President from 2014-2017
- Faculty Achievement Award, Leadership in Engineering Excellence and Diversity, University of Wisconsin—Madison College of Engineering (2018)

- Undergraduate Research Mentoring Award, UW—Madison Office of the Provost (2018)
- UCAR Walter Orr Roberts Distinguished Lecture (2018)
- University of Wisconsin—Madison Vilas Mid-Career Investigator Award (2017)
- MIT C3E (Clean Energy Education & Empowerment Awards) award in Education and Mentoring (2012)
- Leopold Leadership Fellow (2011)
- NASA Earth System Science Graduate Fellowship Recipient (1998-2001)
- Department of Defense Graduate Fellowship Recipient (1995-1998)
- Brown University Department of Applied Mathematics Rohn Truell Award (1995), Sigma Xi Membership (1995), Magna Cum Laude (1995)

RESEARCH ACTIVITIES

* designates student advisees/mentees; # designates interns, post-docs, and supervised research staff
As of March 2022, h-index of 38 (Google Scholar Total)

Select Peer-Reviewed Publications

1. Holloway, T., H. Levy II, and P. Kasibhatla (2000), Global Distribution of Carbon Monoxide, *J. Geophys. Rsch.*, 105, 12,123-12,147.
2. Patz, Jonathan A, Diarmid Campbell-Lendrum, Tracey Holloway, and Jonathan A Foley (2005), Impact of regional climate change on human health, *Nature*, 438, 310-317.
3. Holloway, T., S. N. Spak*, D. Barker*, M. Bretl*, K. Hayhoe, J. Van Dorn, and D. Wuebbles (2008), Change in ozone air pollution over Chicago associated with global climate change, *JGR-Atmospheres* 113, D22306, doi:10.1029/2007JD009775.
4. Spak, S. N.* and T. Holloway (2009), Seasonality of Aerosol Speciation in the Great Lakes Region, *J. Geophys. Research* 114, D08302, doi:10.1029/2008JD010598.
5. Harkey, M. K.# and T. Holloway (2013). Constrained dynamical downscaling for assessment of future climate impacts. *J. Geophys. Res.-Atmospheres 118*, 1–13, doi:10.1002/jgrd.50223.
6. Jin, X.*, and T. Holloway (2015), Spatial and temporal variability of ozone sensitivity over China observed from the Ozone Monitoring Instrument. *J. Geophys. Res. Atmos.*, 120, 7229–7246. doi: 10.1002/2015JD023250.
7. Karambelas, Alexandra*, Tracey Holloway; Gregor Kiesewetter; Chris Heyes (2017) "Constraining the uncertainty in emissions over India with a regional air quality model evaluation" *Atmos. Env.* 174, p. 194-203.
8. Abel, David *, Tracey Holloway, Monica Harkey#, Arber Rrushaj *, Greg Brinkman, Phillip Duran*, Mark Janssen, Paul Denholm (2017) "Potential Air Quality Benefits from Increased Solar Photovoltaic Electricity Generation in the Eastern United States" *Atmos. Env.* 175, p. 65-74.
9. Penn, Elise*, and Tracey Holloway (2020) "Evaluating current satellite capability to observe diurnal change in nitrogen oxides in preparation for geostationary satellite missions" *2020 Environ. Res. Lett. 15 034038*doi.org/10.1088/1748-9326/ab6b36
10. Gallagher, Ciaran* and Tracey Holloway (2020) "Integrating Air Quality and Public Health Benefits in U.S. Decarbonization Strategies" *Front. Public Health*, 19 November 2020 doi.org/10.3389/fpubh.2020.563358
11. Harkey#, M., T. Holloway., E. J. Kim*., Baker, K. R., & Henderson, B. (2021). "Satellite formaldehyde to support model evaluation." *Journal of Geophysical Research: Atmospheres*, 126, e2020JD032881. doi.org/10.1029/2020JD032881
12. Tracey Holloway, Daegan Miller#, Susan Anenberg, Minghui Diao, Bryan Duncan, Arlene M Fiore, Daven K Henze, Jeremy Hess, Patrick L Kinney, Yang Liu, Jessica L Neu, Susan M O'Neill, M Talat Odman, R Bradley Pierce, Armistead G Russell, Daniel Tong, J Jason West, Mark A Zondlo (2021) "Satellite Monitoring for Air Quality and Health" Annual Review of Biomedical Data Science, 4, doi.org/10.1146/annurev-biodatasci-110920-09312

Manifest for Grant Application # GRANT13580559

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 34520 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16027 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24199 bytes)

3. Form SF424A-V1.0.pdf (size 22997 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 23231 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 15913 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37456 bytes)

Attachments Included in Zip File (total 15):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-FFBWW_Partnership Letter_City of Madison.pdf application/pdf (size 634497 bytes)

2. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-LHC_Partnership Letter_City of Madison.pdf application/pdf (size 140371 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-The Hmong Institute_Partnership Letter_City of Madison.pdf application/pdf (size 207109 bytes)

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